

The Horse.

FALL MEETING OF THE DETROIT DRIVING CLUB.

The fall meeting of the Detroit Driving Club will begin Sept. 30 and last four days. It is expected to be the most brilliant event of the fall season. There will be fourteen races and \$10,000 will be the amount of the stakes. The Michigan Trotting Horse Breeders' Association has joined forces with the local club, which will afford Detroit turf lovers an opportunity to witness the performances of the choicest young horses of the Michigan stables. A new departure in racing will be the mode of contesting each event. The best two in three heats will govern in place of the old system of three in five. President Campau believes that by this method much of the jockeying will be done away with, as no driver will be able to "lay up" his horse. The program for the four days is as follows:

First day: No. 1—Four-year-old stake, M. T. H. B. association (closed May 5 with five nominations). No. 2—2:40 class, purse \$1,000. No. 3—Open to all pacers (Johnston harness), purse \$1,000. Second day: No. 4—Five-year-old stake, M. T. H. B. association (closed May 1 with six nominations). No. 5—2:25 class, purse \$1,000. No. 6—2:25 class, purse \$1,000. No. 7—Special three-year-old stake, M. T. H. B. association (closed 1885, two nominations). No. 8—Two-year-old stake, M. T. H. B. association (closed May 1, thirteen nominations). No. 9—2:25 class, purse \$1,000. No. 10—Grand special event, No. 11—2:24 class, purse \$1,000. Fourth day: No. 12—Three-year-old stake, M. T. H. B. association (closed May 1, eight nominations). No. 13—2:25 class, purse \$1,000. No. 14—2:18 class, purse \$1,000.

In addition to the above bill, President Campau is negotiating with the owner of Johnston, to have the latter attempt to beat his own best pacer record, 2:06 1/4. Mm. Marquette will exhibit his stable of running and park horses daily, but the greatest feature will be a special contest between Patron and Jay-Eye-See or Clingstone. Patron's presence is assured and the other horses will come if in condition. Clingstone is being worked daily at Cleveland, and is showing repeated heats below the twenties. Jay-Eye-See has not a mile in 2:16 this summer, but has not yet reached his old mark, 2:10. Patron has a mark of 2:14 1/2, and Clingstone of 2:14. It ought to be a great race.

PEDIGREE ASKED FOR.

DAVIDSON, AUG. 10, 1887.
To the Editor of the Michigan Farmer.

Please publish the pedigrees of the following horses and oblige a subscriber and owner of your patrons: Patron, Maxie Cobb, Masterlode and Belmont 4468. We would also like to inquire if any of Goldsmiths' Mares have done anything on the track or in the stud.

PATRON—Bay horse; bred by J. C. McFerran & Co., of Louisville, Ky.; foaled in 1882; got by Pancoat 4390, he by Woodford 44130, out of Vicara, by Harold 413 (the sire of Maud S.). Dan, Beatrice, by Cuyler 100; g. dam, Mary Manbrino (the dam of Elvira 2181); g. dam, Mary Manbrino 58; g. g. dam, Belle Wagner, by Emory's Wagner; g. g. g. dam, Lady Bell, by Bellefounder Jr.; g. g. g. g. dam, Multiflora, by Mammoth Eclipse.

MASTERLODE 595—(formerly Hambletonian Star); bay horse, bred by James M. Mills, Belleville, Orange Co., N. Y.; foaled in 1868; got by Rysdyk's Hambletonian 10, out of Abdallah 1, out of the Ches. Kent Mare, by Imp. Bellefounder, Dam, Lady Irwin, by Seeley's American Star; g. g. dam by Abdallah 1.

BELMONT 4468—grey horse; breeder not known; date when foaled unknown; said to have been bred by Irish Foxhunter, owned by A. C. Fiske, Coldwater, Mich.

MAXIE COBB 1926—bay horse, bred by Harrison Robbins, Philadelphia, foaled in 1875; sire by Happy Medium 400, he by Rysdyk's Hambletonian 10, out of Princess, by Andrew's Hambletonian. Dam, Lady Jenkins, by Black Jack, a son of Long Island Black Hawk 24.

None of Goldsmiths' Mares have yet distinguished themselves.

GIVE THEM THEIR DESERTS.

A dispatch from Rochester, N. Y., during the progress of the race meeting there, announced that George Tufts, driver of the bay mare Loretta F., and who was beaten by Charley Hogan in the 2:21 race, has been expelled from all Association tracks. It is said that Tufts received \$3,500 for pulling Loretta F. and allowing Hogan to win. C. C. Pond, of Jackson, this State, owner of the mare, declares that Tufts sold out. Pond put \$1,500 on his mare, and wanted Tufts punished. The announcement of Tufts' expulsion was made from the judges' stand after the judges had investigated the case and found that the charges were true. The decision of the judges was as follows:

"The judges having ascertained that the driver of Loretta F. perpetrated a fraud in the 2:21 race, and having sufficient proof thereof, have decided to expel from all National Trotting Association tracks the driver, George Tufts, and further action will be taken with all other parties implicated and connected in the fraud."

"The 'other parties' are understood to be Frank Herlie, the pool seller, and a Detroit banker with a reputation as a gambler, political manager, and general 'boss'."

Overreaching.

In reply to an inquiry in the New York Times, whether there was any cure for overreaching in horses, the editor replies as follows:

"To prevent overreaching, which is the habit of striking the heel of the forefoot with the toe of the hind foot, when either trotting or walking, shorten the toe and increase the weight of the forehoes; also, have no calks on them. This enables the horse to pick up the forefeet quickly and throw them out well in front; and the absence of the heel calks prevents the striking of the hind toe upon them. The hind shoe should be made short in the toe."

This reply is wholly contrary to our own ideas and experience. It is in fact just the reverse of the truth. The suggestions will produce overreaching, not cure it. How can increasing the weight of the front shoe cause the foot to be raised more quickly;

and if the shortening of the toe will have the effect, will not the shortening of the toe of the hind shoe counteract this? Most assuredly.

A sure way of removing this unpleasant failing in the movement of a horse, in a majority of cases, is to shorten the toe of the front shoes and lengthen the toe of the hind shoe. By this arrangement the horse will pick up his forefeet quicker, and the hind feet slower, thus accomplishing just what is wanted. If a quarter of a second of time is thereby gained, the forefoot will be clear out of the way of the hind foot with its elongated toe.

We owned a valuable horse once subject to overreaching. He was taken in hand by several experienced shoers, and every one adopted the erroneous method recommended by our New York contemporary. Being in the stable one day, we sat down upon a chair, after examining the shoes, to devise some way to cure the animal of this defect; and the conclusion we arrived at led to insisting upon the shoe following our instructions, the result of which was a complete success. Now and then a new shoe would not be aware of this overreaching and would shoe in the old way, when the overreaching was as bad as ever, until the shoes were removed. We had another horse cured in the same way, as had at that time many other persons. Indeed, we have never known this method to fail when properly followed.—*German Town Telegraph.*

Brittle Hoofs.

Horses are frequently troubled with brittle hoofs, caused by deficiency of water in the bone. This is caused in various ways—fever of the feet, or the common founder; inflammation of the interior of the foot; exposure to fermenting manure or filthy stables, by which the horn is saturated with moisture containing ammonia; leaving the feet covered with mud; or even continued hot or dry weather, or an unhealthy condition will produce this trouble in the feet. The horn becomes dry and granulated, and separates very easily, crumbling or splintering away until there is scarcely crust enough left to fasten a shoe upon. The remedy is, of course to remove the cause and restore the moisture. Frequent washing of the feet with cold water, with attention to the health, and to give the horse clean bedding and an earth floor to stand upon, or else a deep bed of sawdust, will prevent it, or cure it in many cases. Glycerine and water in equal parts is an excellent dressing for the hoofs. An occasional soft feed, as bran mash with a little linseed, is also useful, because it keeps the horse in good health and cool. Tar is sometimes used as a hoof dressing with advantage, but it needs caution in its application.—*Boston Transcript.*

Horse Gossip.

JOHN MURPHY, who has charge of Maud S., says he recently drove her a mile at Tarrytown, N. Y., in 2:10 1/2. But these private trials must be taken with a grain of allowance—say 10 seconds in this case.

THE BARD, the great racer owned by A. J. Cassatt, and a son of the famous Longfellow, is said to be dying from inflammation of the stomach it is thought. The Bard was never beaten but once, and then he carried extra weights.

"LUCKY" BALDWIN has issued a challenge for a two-year-old sweepstakes race at Sheepshead Bay or Prospect Park, open to all comers, for a purse of \$2,500. Baldwin thinks he has a two-year-old, Emperor of Norfolk, who can "do up" anything of his age in the world.

CHARLEY HILTON, the fast son of Louis Napoleon, has been sold by Mr. Sisson, his breeder, to Messrs. Hickok and Crawford, the well-known drivers. Look out for him now, as these gentlemen will probably get faster time out of him than he has yet shown when it is necessary.

JOHN SPAN says that the majority of trotters are trained too much. While John's word regarding most everything pertaining to trotting horses is open to suspicion, he is very likely stating the truth in this instance. Trotters are being trained too young and too much.

E. M. KIES, of Reading, Mich., has bred his three-year-old filly Belle K., full sister of Belle F. 2:15 1/4, by Masterlode (595), dam Belle Hastings, by Magna Charta (105), and also the dam of Kittle Yan 2:24, St. Bel 5386, (record as a four-year-old, 2:24 1/2). St. Bel is by Electioneer 125, dam Beautiful Bells, by The Moor 870. He is therefore a full brother to Hinda Rose, record 2:19 1/4, as a three-year-old, Chimes, record 2:32, as a two-year-old, and Bell Boy, the fine young stallion recently purchased by S. A. Brown, of Kalamazoo. Mr. Kies ought to have a great trotter.

The Farm.

Experiments with Potatoes.

Enterprising farmers obtain much valuable information for themselves and for others by experimenting with different crops, carefully measuring the results instead of vaguely estimating them. There are some crops, however, which are liable to give such varying returns, that caution is needed to prevent erroneous conclusions, even from carefully conducted trials; or their teachings may apply to only limited conditions. There is no crop which is so liable to give varying conclusions from experiments as to the potato. The reason of this is that the seed is used in several different forms, as for instance, large and small tubers, cut or uncut, single eyes or several eyes in a hill, and the growth of these varying forms may be largely affected by the soil, whether wet or dry, pulverized or cloddy, or by the character of the season whether cold or hot, moist or with a prevailing drought. The seeds of other crops are not affected to the same degree. Experiments, however, always afford valuable teachings, although in case of the potato they must be longer continued and repeated under different circumstances.

A series of accurately conducted trials, by Edmund Hersey, of Hingham, Mass., is reported in a late number of the *New England Farmer*, and the results are made distinct by engravings from photographs of the growing plants and of the tubers after digging. The conclusions which Mr. Hersey has drawn from his experiments, continued

for a number of years are—1, that whole potatoes will produce a crop from a week to ten days earlier than cut potatoes; 2, that small whole potatoes will produce for many years in succession, as good if not better results than large potatoes cut the size of the small size of the small ones; 3, the "seed end" of the potato starts with more vigor, and produces larger and more potatoes; 4, a large piece will produce a better crop than very small pieces or single eyes; 5, that long sprouts, broken off, leave the potatoes worse off than those with eyes just starting; 6, that the potato scab is not propagated from the affected seed.

Some of these conclusions accord with common practice, while others materially vary. Conclusion No. 1 may be greatly modified by the condition of the soil; the whole skin of an uncut potato being impervious to moisture, retains the freshness of the tuber, while a cut piece is open to speedy drying up, and in a cloddy or dusty soil loses much of its value before it has given the new sprouts a fair start. In a strong, compact, finely mellowed soil, with early planting, there will be little difference. Conclusion No. 2 would be changed by some modifying influences. It is a common opinion that small potatoes are of less value than large ones. This opinion is mainly owing to the various modifying influences already mentioned, the small whole potatoes withstanding the effect of a light soil better than cut ones; and late planting would usually make more difference in favor of the whole tuber than early planting. For a similar reason, the large piece mentioned in the last conclusion will aid the growth of the new shoots better than the small piece which would dry up more speedily, but there would be but little difference with very early planting in a fine, moist soil.

Several of Mr. Hersey's experiments had but a single trial, and are therefore of little or no value, as the results may have been largely modified by the external circumstances which we have mentioned.

The trials which were made with smooth and with scabby potatoes, have been repeated three years with the same results, those which were very scabby when planted, and those perfectly smooth, having in both cases produced crops entirely free from the defect. But Mr. H. prefers to continue the trial three years more before settling on a definite conclusion.

While we would offer every encouragement for the performance of careful, measured and accurate experiments, it is well to observe particularly the various causes which may affect or modify the results, a care which is quite necessary in arriving at correct conclusions, and more important than merely accurate weighing and measuring without noting their influence.

The difference in the amount of the crop between planting large and small seed, as already stated, is doubtless mainly owing to outside influences, and the character and nature of the variety is not changed by the size of the tuber. The crop of any particular variety of the apple or pear is not augmented by selecting a large shoot for a graft, nor diminished by using a small one. A large graft on a feeble stock could not be expected to make as good a growth as a small graft on a vigorous one; and in the same way a small potato with an early start in a genial soil would do better than a large one with a bed of poor earth to grow in. Hence the main effort for success in potato raising is to give the seed the most favorable conditions for success. Various circumstances may sometimes point to the use of whole tubers for seed, and others to sections, the practice being guided and controlled by a knowledge of the most favorable conditions.—*Country Gentleman.*

A Farm Pest.

The Hessian fly has at length extended its habitat to England. When this destructive insect was first discovered about a year ago in a field near Hertford it was hoped that, like the Colorado beetle, it would quietly disappear without establishing a footing in the British Isles. That single chance for the wheat grower seems to have vanished, for not only has it again made its presence felt all over the wheat and barley fields in its old haunts, but it is reported to have attacked the growing barley plants in Perthshire and Cambridgeshire, and is multiplying at an alarming rate. It is also announced from Bedfordshire, from Essex, and from various localities near Inverness, and is suspected in numerous other quarters. The Britisher must therefore face the fact of the naturalization of a pest which in Canada and the United States has cost the farmers millions of dollars.—*Toronto Mail.*

Preparing Corn Land for Wheat.

N. S. Shepherd, of Missouri says in the *Kansas Farmer*:

Where a system of rotation with wheat, corn, oats, hay, grain or clover is followed, it will sometimes be found a good plan to have wheat follow corn. If the corn has been properly cultivated and kept clean and the soil mellow, corn land can be very easily prepared in a good condition for fall seeding to wheat. I am satisfied that in a majority of seasons it pays to cultivate corn reasonably late, at least until as far as possible the crop is assured, and especially to follow this be done when we are intending to follow the corn with wheat. If this plan has been followed the corn ought to be clean of weeds and the soil reasonably mellow. I always make it a rule to cut the corn close to the ground. This in a great measure does away with the interference in preparing the land by the stubs of the cornstalks. If only a small acreage of corn land is to be seeded to wheat, I should certainly advise cutting and hauling off. Three men and one team will get the corn off very rapidly, and the ground is then in a much better condition to seed to wheat. Unless you are better prepared than the average farmer a large acreage would be hard to clean up in this way, so that the next best plan must be adopted, and that is to cut and set up the corn in good-sized shocks, making the rows straight so that as much of the land as possible can be seeded, the common farm harrow can be used. I prefer to harrow the way the corn was plowed or cultivated the last time, as the first harrowing breaks the crusts and loosens up the surface. The cross harrowing levels the soil and loosens it up much more thoroughly than if harrowed across the rows; at least that is my experience. Much depends upon the soil how many harrowings may be necessary in order to suffi-

ciently fine the surface for seeding to wheat. But sufficient depth to furnish a mellow bed for the seed, both to insure germination and covering. I prefer always to use the drill for seeding; the seed is sown so much more evenly and at a more uniform depth than can possibly be done by hand, that I consider it pays to use the drill. Besides, drilling saves time, and in the fall when work is something of an object.

I like to have land seeded to wheat reasonably clean and thoroughly prepared in a good condition, and the expense of one more harrowing would be a small item if it is necessary to a proper preparation of the soil.

An Underground Milk-House.

H. Stewart, in the *Country Gentleman*, describes a convenient milk house:

An underground milk house should be made 12 feet deep, in dry, well-drained ground, or in a hillside of suitable character. The lower part should be nine feet deep and walled with stone or brick. One 12 feet square will be ample for a dairy of 20 cows or less. Beams are laid in the wall for the floor of the upper cellar. A trap door and an open stairway is made in this floor at one side, and a square opening in the centre covered with glass to admit some light. This opening is protected with a safe railing. The shelves are ranged around three sides, the other side being occupied by the stairway and a table or bench. The wall is kept white by occasional whitewashing or kalsomining, and this keeps the cellar sweet. If the air becomes damp at any time, a peck of fresh lime may be placed in it, and as it will absorb seven pounds of water and still be dry, it will be found very useful in maintaining the requisite moderate moisture of the air. The churning may be done in the upper cellar, which is three feet below the ground level and has a board roof to protect it from the sun. The window should be on the north side, and a ventilating door should be made in the ceiling of this room.

If the cellar should become too warm at any time, the air may be cooled by carrying into it a block of ice; any moisture in the air which may be condensed by this decrease of temperature will be quickly taken up by the lime.

Experience will suggest any desirable improvement upon this plan, which has been found to work excellently and to keep a very regular temperature during the hottest weather. It is necessary to be cautious in ventilating such a cellar in the day time, when it should be kept closed, and if left open at any time it should be on a clear, breezy night.

General Purpose Sheep.

The *Sheep Breeder* says that F. D. Curtis, of New York, has reached the conclusion that there is such a thing as the "ideal general purpose sheep," and that this idea is a one-fourth blood Merino and the rest a blending of Southdown, Cotswold and Oxforddown. Nothing that we have read for years so forcibly reminds us of the old story of the boy dog-trader, who, having cracked up his dog as part greyhound and part English setter, on being asked what the other part was, replied that therest was "Curtis' ideal animal, with his infusion of Merino, Cotswold, Southdown and Oxford-down blood will be after all 'just sheep,' and considerably short of an ideal—no doubt at that. If the history of sheep husbandry shows anything, we think it shows pretty clearly the fallacy of attempting to combine the blood of more than two breeds of sheep. Mr. Curtis is experimenting on a cross of another character, which commends itself to the practical breeder. It is a three-fourths Oxforddown and one-fourth Merino. This cross produces a brown-faced sheep of a hardy, rugged type, rangy on the legs, with a compact fleece and the staple long and crimped.

Mr. Curtis contends that none of the English breeds of sheep are exactly suited to the American want, and that it is desirable that a distinctly American breed combining the best qualities of the Merino and mutton breeds be attained by the American sheep breeder. This view is held by many, while there are a very considerable number who maintain that the Southdown, Shropshire or Oxforddown after becoming acclimatized, are as well adapted to our pastures as to their native fields, and that the best results are secured by preserving the distinctive features and traits of the different breeds named.

Injury to the Foliage of the Potato.

The *American Cultivator* says: It does not require the entire destruction of potato vines to injure the yield and quality of the crop. Where the larva of potato bugs begin eating the vine, and are stopped, the plant puts out new leaves and does its best to repair the damage. But if the injury has gone far the crop is spoiled. Any other attack on foliage is just as bad as the dreaded bugs. We once knew a man who thought to do a smart thing by cutting down his potato vine with a scythe when the bugs began operations. He got rid of potatoes and bugs together at one blow. Others have unintentionally done the same thing by over-laying doses of Paris green. If the poison is pure a very little of it is enough to burn the vines as if a fire had passed over them. There is much difference in Paris green. Some dealers seem to understand the popular tendency of farmers to use it too strong, and therefore they dilute it so as to guard against this danger, and to add to their own profit.

The result altogether is that the average of potatoes, between the bugs and the poison used to destroy them, is not as good as it was before the bug era. Possibly this is for the best. We as a people were perhaps learning to live too much on potatoes for our good, just as the Irish used to before the potato rot and the famine. They are a farinaceous food, and therefore not the best adapted for giving strength and vigor. We use a great many potatoes, poor as they often are. If they were always mealy, white and fine grained, should we not use many more than we do? Yet possibly the poorer quality of potatoes, being less farinaceous, must be really the best food. There are occasionally persons with taste so perverse that they prefer a moist, soggy potato to one dry and mealy. Still, according to the general liking, the better foliage a potato has, the better its quality and greater its yield. It is therefore likely

that few or none will purposely allow their potatoes to become defoliated when it is possible to prevent it.

Agricultural Items.

The pigs in the pen will thank you very kindly for the purline or "pusly" uprooted in the garden. "Meaner than pusly" has passed into a proverb; it is one of the most troublesome weeds the gardener deals with. But the pigs love it.

A CORRESPONDENT of the *Country Gentleman* has found that a fluid ounce of crude carbolic acid added to three gallons of soap suds, is a sure remedy for lice on cattle. He selects a sunny day, and washes the cattle all over with a cloth.

An analysis of our export trade for the last fiscal year gives about 75 per cent for agricultural products, against 20 per cent of manufactured articles. Unless the farmers prosper there can be no permanent prosperity for the State or nation.

The best time to sort potatoes is when they are dug. Do not let the potatoes lie in the hot sun, nor remain in large heaps till they are cured. As fast as they are dug they should be spread in the shade, not over six inches deep, and left until thoroughly dry.

It is said that the mosquitoes have been a terrible trial to man and beast in some parts of New York this season, owing to the wet, hot weather. A man at Unionville has a cow so bitten by insects that there is not a spot on her body not covered by a blister.

T. BENNETT, of Trenton, N. J., says a powder made of gas tar and lime, one part of the former to 16 of the latter, proved an effective insecticide for the potato beetle on his farm. Two applications repelled them for the season. The same remedy is good to kill all descriptions of plant lice. The remedy is simple and cheap.

THE pork from swine fed on skimmed milk and buttermilk, with grass, apples, etc., and finished off with corn a few weeks before slaughtering, is superior in flavor to that made from animals gorged on an exclusive diet of corn. It does not "waste in the pan" as does corn-fed pork, either.

THERE is a less wasteful way of feeding corn fodder than that of scattering it over the barnyard to be trampled under foot and fouled, so that it will not be eaten. Barks made along the fences or sides of the barn will prevent the waste and such parts of the fodder as are left by the cows may be thrown into the hog pen.

A BREEDER of thoroughbred cattle, who is making quite a specialty of dairying as an adjunct to his business, remarked the other day that the owner of a fine farm near him had offered him the use of the farm rent free for two years, if he would simply leave upon it the manure made in his business. He also added that he did not know a farmer in his vicinity whose profits amounted to as much in the year as the manure from his cattle was worth in the same time. There is much worth thinking about in all this as connected with stock-raising, and especially dairying, where a system of feeding is pursued calculated to add materially to the value of the manure pile.—*Stockman.*

Important to All who Work

A TRAVELING: WRITE TO THOMAS & CO., 200 South Main, Maine, and they will send you full information, free, showing you how you can make from \$5 to \$25 and upwards a day, and live at home, wherever you are located. Some have made over \$40 a day. Capital not required; you are started free. All ages; both sexes. All are new. Great incomes arise from the start. Fortunes await all workers who begin at once.

The Poultry Yard.

Selection of Turkeys.

Our plans may not find many advocates among the breeders of heavy weight turkeys, but nine out of every ten old turkey breeders will say that we are right in that. We do not strive to get abnormally great size in our breeders, either male or female, and we do this for the very good reason that the eggs of the largest hens are not as large, as a rule, as those from fair to good-sized hens, and it is pretty generally conceded that for active vitality and sure breeding, the male must not be too large. It is merely a question of corn and age as far as size and heavy weight is concerned, or largely so, for we have taken the common scrub turkey and made them weigh twenty-five pounds at two years and less of age. With the larger breed of turkeys a goodly weight can be made with very ordinary care and a small amount of food; therein lies the superiority of these good breeds over the common.

But in picking out the hens for next spring's breeding, do not let great weight alone influence you. Good form, fine, stout drum sticks and square bodies and breasts are what are wanted. Much the same with the male, in buying look to these points. We have deemed it necessary to drop these words of caution seeing that so many appear to think that the extreme weight possible is the main thing to be desired in breeding turkeys.—*Western Rural.*

Give the Chickens Room.

In keeping poultry do not crowd over thirty hens or pullets into each of the apartments in the hen house, as you will receive more eggs from forty to fifty in the same room. Neglect of this point has caused more disastrous failures and has discouraged more poultry men than any one thing except incubators. Many people have an idea that one hundred hens will give four times as much profit as twenty-five. It is true they will, but they must be kept under as favorable conditions. They must have four times the room, be kept in four flocks, be given four times the care and food; and then they will pay in the same proportion as the smaller number.—*Prairie Farmer.*

BANTAM, a town and district of Java, has given its name to the diminutive fowls known as Bantams, the wild Bankiva being the bird to which they owe their origin. But the probability is that the various breeds originated in the East. This is proven by the fact that we now receive some of our quaintest specimens from China, Japan and Burma. Many of the more recently introduced breeds in the non-game varieties have

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NEW ADVERTISEMENTS.

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been brought over from these countries, and there must have been in the east poultry breeders who understood the art of breeding very fully, and have been inspired by some of the quaintest ideas. We must therefore give credit and acknowledge that many of the Bantams we have are due to eastern nations. But on the other hand, there can be no question that the majority of our Bantams have been bred down from the larger varieties, though in the operation it is more than likely existing breeds have been used.

A CORRESPONDENT in *Gardening* describes a very ingenious method of preventing hens remaining broody. When they show a desire to sit, he says that for the last two years he has been very successful in preventing them from sitting. He has divided his run into two with wire netting, keeping half the fowls in each division. As soon as a hen in one yard shows any signs of broodiness she is placed in the other, when she invariably spends two or three days in running backwards and forwards, trying to get back through the wire; at the end of that time she has quite forgotten that she wants to sit, and can be returned, and will probably commence laying again in about three weeks. The plan is obviously far superior to that usually followed of cooping a hen when broody, as the incessant exercise must have a strong effect in lessening the tendency to sit.

In the act of crowing a bird stands up and then stretches his neck to its fullest extent. A small loosely suspended about eighteen inches above the perch will obviate the necessity of crowing, and thus prevent a nuisance, the swinging tail comes gently into contact with his comb and effectually stops him.

It takes 3,000,000 pounds of feathers to supply the demand for feathers for bedding purposes in the United States annually.

We would call the attention of our readers to the Arnold Automatic Steam Cooker advertised in another column of this paper. This Cooker has received first-class medal or diploma wherever exhibited, and is fast becoming a household necessity to all who care for economy and value health and happiness. To agents who want an article of genuine merit, one that sells easily, pays well, and is the very best of its kind, we would say write Wilmot Castle & Co., for full particulars.

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TRADE MARK
DON'T DIE IN THE HOUSE
Gone where the Woodbine Twineeth. Bats are smart, but "Rough on Rats" beats them. Clears out Rats, Mice, Roaches, Water Bugs, Flies, Beetles, Moths, Ants, Mosquitoes, Bed-bugs, Fleas, Potatoes, Bugs, Spiders, Skunks, Weasels, Gophers, Chipmunks, Mole, Muskrat, Jack Rabbits, Squirrels, etc. & c.
"Rough on Rats" is a complete preventive and destroyer of Hen Lice. Mix a 5c. box of "Rough on Rats" to a half of whitewash, keep it well stirred up when you wash, and wash the whole interior of the henhouse inside and outside of the nests. The cure is rapid and complete.
For Potatoes Bugs, Insects on Vines, Shrubs, Trees, 1 pound or half the contents of a \$1.00 box of "Rough on Rats" Agricultural Size to be thoroughly mixed with one to two barrels of plaster, or what is better, a slacked lime. Much depends upon the nature of the soil, to completely distribute the poison. Sprinkle it on plants, trees or shrubs when damp or wet, and is quite effective when mixed with lime, dusted on without moisture. While in its concentrated state it is the most active and strongest of all Bug Poisons when mixed as above is comparatively harmless to animals or persons, in any form it would take. If preferred to use in liquid form, a tablespoonful of the full strength "Rough on Rats" Powder, well shaken in a keg of water and applied with a sprinkling pot, spray syringe or whisk broom, will be found very effective. Keep it well stirred up while using. Sold by all Druggists and Storekeepers. 10c. 5c. & 2c. E. S. WELLS, Chemist, Jersey City, N. J.

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Horticultural.

The Great Horticultural Need.

There is no question that the great majority of our people who live in the country do not enjoy what they might in the way of horticultural comforts and luxuries. They occasionally have a fine treat of delicious fruit—it may be from some careful and intelligent neighbor, or from an isolated tree on their own grounds. But during most of the days of the year they have nothing. A fruit-raiser sent choice dishes of strawberries and raspberries to some of his neighbors, offering at the same time the plants gratis, for planting time. They were "delighted"—would certainly plant and raise the fruit for themselves. But when planting time came every one forgot his resolution—they were busy about other things. It was true that one of them bought of a traveling agent some high-priced plants, most of which died from want of care, and the few which lived and bore proved inferior to those which the neighbor bought and offered without pay.

If any one will take the trouble to inquire, he will find that very few of the neighbors have a regular and daily supply of fresh fruit for their families, or on their tables. It is because they are too poor to raise it? Not at all—the cost is trifling—they have land enough—their gardens are growing more weeds in quantity than the required growth of fruit-bearing plants.

The great need is the absence of intelligence and the want of interest. The people have not informed themselves how easy it would be to provide a continuous supply of these luxuries. They do not know of the best and productive sorts. If they happen to procure any, it does not receive the same care that farmers give their corn and potatoes, and the plants either die or yield poor supplies. It cannot be denied that these remarks apply to a great multitude, while there are many exceptions. Not being informed as to the best sorts they are sometimes badly imposed upon by counterfeit fruit agents. Their families suffer the privation of both the health and comfort which might be easily afforded. The owners, with the plea that they "cannot afford" to raise fruit, lose the benefit of the economy which a plentiful supply would give them. The remedy for these formidable defects is to educate the people at large—to let them know what the best fruit is; how easily it may be had under proper care; to learn how much it would aid in lessening doctor's bills; to see how it would reduce grocers' bills; and to contribute towards making peasant homes. Those who have plenty of excellent fruit may aid in the good work by sending presents to their neighbors, and show how readily they may help themselves; while on a larger scale, periodicals, books, and fruit growers' societies may aid largely in the general good.—Country Gentleman.

How to Cut Asparagus.

The late Major Moore, in the *American Cultivator*, says: Asparagus is, to my taste, one of the most delicious of vegetables, and the doctors also say that it is very healthy having a beneficial effect upon the kidneys. I planted a large row last year, with purchased ones, only about half of which lived, and now what I had sown the seed instead, as I think I would have had larger plants say in three years. Asparagus is a rank feeder, and I have had a generous supply of fresh stable manure, mixed with the sweepings of the hen-house, spread on the beds, and dug in with a flat-bladed, three-pronged digging fork. Later in the season I shall apply a top-dressing of salt, which will be dissolved by the winter rains and absorbed by the soil. It will kill all weeds and grass, but it will be grand for the asparagus, which is naturally a marine plant, and which craves salt, as a Cape Ann man craves the salt air when he is on the western prairie.

Let me add the opinion of a successful cultivator of asparagus on the best way of cutting it. Market gardeners, and I believe a good many other people, cut asparagus as soon as the point of the shoot pushes an inch or two through the ground. They have then about two inches of what grows above ground, and about four or six inches of what grows below. The latter looks white and tempting. I suppose people think that for the same reason that the white part of celery is tender the white part of asparagus must be so. There is as much difference as between a goose and a gander. It is as tough as a stick; and this is the reason why people, when it is boiled, always are forced to eat the tops and leave the bottom of the shoots on their plates.

The way recommended is, never to cut, any shoots of asparagus below the surface of the ground. Cut it as soon as it has grown to proper height, say five or six inches above ground. The whole is then green, and it is all tender. Served with a little drawn butter, it will melt in your mouth. If my readers have any doubt of this, from having been in the habit, all their lives, of eating hard sticks of white asparagus, only let them cut it both ways and boil it on the same day, keeping the two lots separate, and my word for it, they will never cut another stalk below the surface of the bed.

The Parsnip.

When well grown, the parsnip is considered to be one of our most valuable and desirable garden vegetables, and it is to be regretted that so little care and attention has been bestowed upon it by our amateur cultivators, for it well deserves a place in all gardens, no matter how small.

It prefers a deep, moderately enriched sandy loam, one that has been well worked for a previous crop, although any other will answer if thoroughly and deeply plowed as possible.

It is best to give a liberal dressing of decayed manure, and this should be well and deeply incorporated with the soil by means of the plow. A good harrowing should then be given, so as to level it off nicely, when it should be marked off into drills about two feet apart and an inch and a half in depth. In these drills the seed should be sown rather thinly, and covered to the depth of about half an inch.

The seed should be sown early in the spring, just as soon as the ground can be properly prepared. As soon as the young

plants are strong enough to handle they should be thinned out, so that they stand five or six inches apart, then a thorough hoeing should be given. After this all the attention they will require is to keep them well cultivated and free from weeds, and at each hoeing let a little fresh earth be drawn around the plants.

As they are best after being touched by frost, it is customary to permit at least half of the crop to remain in the ground until toward spring, when it can be dug and used. The portion of the crop intended for winter use is dug in November, the later the better, and stored in sand in a cool cellar.

The long, smooth, or hollow crown, is the variety most generally grown, but the student is, in my opinion, a much better variety; but one will not go astray in selecting either of them.

An ounce of seed will sow one hundred and fifty feet of drill.—*Vick's Magazine*.

Movements of Roots of Plants.

It is popularly supposed that plants are distinguished from animals in not having the power of motion. Any one who has studied the lower, microscopic forms of plants knows that no distinction of this kind can be made; for many of these simple vegetable forms move as spontaneously and freely as any animals ever do. These plants are aquatic, and swim rapidly through the water by the vibration of hair-like appendages. None have locomotive organs similar to legs or wings of animals, but when closely studied it is found that all plants possess the innate and self-controlled power of movement. This is conspicuous in the stems of twining plants. These wind about a support by an inherent force which carries the free end of the vine spirally about a stake. Arriving at the top the growing end reaches upward and outward, and at the same time swings in its own special direction around, sweeping a circle whose radius constantly increases by the elongation of the growing shoots. In this way the end of climbing vines, like hops, may traverse a circle three to five feet in diameter, and complete the circuit in from one and a half to two and a half hours. We readily see the use of this swinging movement in the vine, for, as the growing end spirally reaches out in every direction, new supports may be found, and the possibility afforded of higher ascent. Nor is the search altogether haphazard, for such climbers always reach forward on the side from which least light comes; thus a post, or other object, by intercepting the rays of light, is always likely to be gained by the vine. The opening and closing of flowers and what is called the sleep of leaves furnish other illustrations of these self-caused movements in plants. Now it has been ascertained that the growing tips of all roots, when free to do so, continually move so as to describe some form of an ellipse. As the end advances, and at the same time a spiral figure is produced by the path of the moving tip. Of course such movements cannot take place when the roots closely press upon the soil upon all sides. But in germinating seeds not buried in the soil, and wherever in the earth a cavity is reached by growing roots, such movements, always occur. The extent of the lateral swing is always very small, and takes place only in the terminal inch, or two inches at most, of the root. Here again the movement is a spiral one. In primary roots—the main root from the seed—if the axis is horizontal the downward swing is greater than the upward, and the tip therefore gradually bends toward the centre of the earth. When at last a vertical direction is attained, the swing from the centre becomes equal and the direction is retained. What causes the leading stems of plants to grow away from, and the primary roots to grow toward, the earth's centre, has long been a subject of curious research. The best information we have upon the matter is that these parts of plants are inherently endowed with the ability of using the action of gravitation as a guide and of directing their course as growth thereby. Gravitation, as a force, certainly does not produce the results. At the divergence of two roads a traveler may be forcibly carried by an unmanageable horse in one of the two directions, or he may leisurely consult a finger-board placed there for the purpose, and deliberately move in one of the ways. We cannot say the plant tells which way to go, but its action in relation to light and gravitation resembles the latter, not the former part of our illustration. I have been careful to say "leading stems" and "primary roots" above, for secondary branches of stems and roots behave differently. Secondary roots make their way more or less in a horizontal direction, and branches from them seem to have no power whatever to direct their course by gravitation as a guide. It is worth while, however, to mention that when a vigorous primary root is killed at its lower end, a secondary branch usually assumes the properties of a primary and takes the place of the latter, just as a side branch of a tree may become the leader when the latter is destroyed.—*Prof. Burritt, in Horticultural Times*.

Cabbage.

One of the principal crops grown by the farmers around Lowell, Mass., is cabbage, for winter and spring market. The stone Mason of the best strains is the only variety planted to any amount, unless through ignorance or to save time somebody goes to the "store" for their seed, and then they raise a great variety of fodder and possibly a few heads of varied colors and shapes, but most of the farmers about here know their business too well to be caught napping in that way. They believe in manuring heavily, plowing or harrowing it in, though sometimes putting it in the hill if the quantity is limited, and many of them use a little phosphate in the hill. For manure they go to Lowell and Boston. They plant the seed in the hills where the plants are to grow and mature, from the first to the middle of June, and often set plants as late as the middle of July, if they have a little room to use where some early crop has been removed, but the best and heaviest crops are grown without transplanting.

The cabbage crop should be cultivated and hoed often and thoroughly until the plants cover the ground; from three to four hoeings will be required to keep the crop clean and doing well. Winter cabbage will be ready to put away from the last of October

to the 10th of November, being about the last crop to harvest, for they are not injured by light or quite heavy frosts, and though the ground may be frozen somewhat they will be unhurt; yet it is better to get them in a day or two before you are obliged to, rather than leave them one day too long, as repeated freezing and thawing will greatly injure their keeping qualities.

There are two methods of disposing of the crop: One is to sell at the going price directly from the field, getting from forty cents to one dollar per barrel according to the market; this method gives very little if any waste and makes very easy and clean trimming and sometimes gives the best returns, for some years the price is as good when harvested as in March or April following.

The other method is to hold the crop until winter or spring, and this makes storing necessary. The farmers of Draught practice storing in cellars, and a number of them have built large cellars expressly for this purpose, while others use their barn cellars or the basement of some outbuilding.

One of the largest of these storage cellars is about 60 feet by 40 feet, and 10 feet high, built in a side hill with doors and shutters in the south side and a henhouse in the roof above it; this cellar gives room for perhaps 1,500 barrels of cabbage, beside having one end partitioned off for storing 300 or 400 barrels of onions; the cabbages are cut up about half way of the stump, the loose leaves trimmed off and the heads packed away in racks that are built from the top of the cellar, these racks are so arranged as to allow a passage every six feet or so and the heads are laid in only one deep on the shelves so as to allow frequent inspection and thorough circulation of air.

In such a cellar the cabbage can be taken out very conveniently at any time that the price is good enough to suit the owner, and if the temperature has been properly attended to will come out fresh and crisp, and bring a good price.

Another way of storing is to cut them up about half way of the stump if well headed, if loose full roots and all, set them head up on grass ground and cover with pine shives, oak leaves or with meadow hay, but it requires much more hay than leaves to keep out the frost. And still another way of bedding is practiced by some of the gardeners near Boston and by some seed growers who pack them away in a broad, shallow pit, cover with straw or hay and then with dirt, and I have seen beds covered first with dirt and then with seaweed. The object being in all these different ways to so cover them as to keep them warm enough not to freeze much, a little freezing does no harm, and keep them cool enough not to heat and decay. This all seems simple enough, but when put in practice it is found quite difficult to make a perfect success of it.

Cabbage should be bedded in some well drained spot, for wet ground or standing water will draw frost, and it is necessary to have the rain find a quick passage from the bed or frost will often follow it down and spoil the cabbage. I have tried to make plain the different methods of keeping the crop and now, to be objects of keeping it, which are two, one to save valuable time at harvest and the other to gain money in the selling. Although there is sometimes a year when the price rises but little on account of an extra large crop or some such cause, and the farmer is disappointed, and higher in winter and spring than when harvested was the case this last year when the price rose from 50 cents per bbl. in November to \$2.50 and \$3.00 per bbl. in April and first week in May, although those who sold in January or February received only from 75 cents to \$1.25. To know just how to keep the crop and just when to sell it, requires experience and a close watching of both the market and the supply, but the reward when you get it is sufficient to pay well for the work and expense incurred.—*N. E. Farmer*.

Pear Culture.

The following paragraphs are taken from a report made to the State Horticultural Society by its Secretary, Mr. G. C. Brackett, and adopted by that body.

Site.—It should be selected near by the dwellings—other requisites being present—for the convenience of giving proper care in culture, protection, and handling of the fruit.

Elevation.—The highest locations are the most desirable, as affording the facilities of drainage and necessary circulation of air, and an escape from disastrous spring frosts, as the tree is naturally an early bloomer.

Slope.—Avoid a southern or western slope; all others are preferable, and an eastern the best.

Soil.—This subject naturally divides itself into a selection between the two classes of trees, known as standard and dwarfs. We will consider the first class, viz., standards. These are trees grown by propagating the pear clone or bud on the pear root. It thrives best on a sandy or reddish soil, having an open, porous subsoil to a great depth, for the reason that the pear roots naturally descend into the lower strata, and are most healthy in a well-drained surface and subsoil—conditions always present in soils of the above characterizations. Under such conditions the elaboration of food is natural; the deposits are made at the proper season, and mature into a character of ripeness capable of resisting attacks of disease, of enduring drought, and the extremes of heat and cold. With such trees there can be no questioning the character of the fruit product or longevity of the tree. The second class, viz., dwarfs, are trees produced by budding the pear onto the quince stock. The roots are of a fibrous character, and take kindly to a loamy soil with a clay subsoil, or even a general clay land, and as the larger portion of the soil formation in this State is of this character, I am convinced that the dwarf is the safer class to use.

Drainage.—Amply drainage of both surface and subsoil is one of the indispensable requisites to a successful pear culture, and no orchard will thrive, or even live, for any length of time on land saturated with or which retains a surplus of water.

Shelter.—A wind-break.—These are as important to a success with the pear as the apple orchard, and should be constructed of low-growing trees, on the south, west and north sides. A single row, with the trees six feet apart, is sufficient, excepting for exposed locations on open prairies, when

there should be two rows six feet apart, and the trees in one row alternating with those of the other. As the pear is seldom planted in large numbers in this State, in the absence of other shelter it will be found convenient and advantageous to set them alternately in rows of an apple or peach orchard, running north and south. This method will secure both shelter and a partial shade from the noontday sun, which is to some extent the inducing agent to the development of "blight."

Preparation of the Land Before Planting.—All land designed for pear trees, either standard or dwarf, should be well tilled and the subsoil well stirred. The system practiced in the most successful pear-growing regions in the United States is trenching. But the average planter would prefer to do without piers rather than adopt such an expensive method. Therefore, as a substitute, which in a measure will help to succeed, the land can be stirred 12 to 15 inches in depth by running the plow twice in the same furrow, turning the land first from and then twice to the line for the row of trees. This will raise the surface into a ridge on which to plant the trees, and both deep tillage and drainage will thus be secured.

Selecting Trees.—One-year-old trees are preferable, though they cost the price of older ones. They should be stocky and vigorously grown, and well supplied with fibrous roots. The top should be cut back to within one foot of the collar, at time of planting. This will secure the formation of low heads, which is of more importance with this fruit than any other. When the roots lack fibrous growth, which is quite common with standard trees, lateral roots should be encouraged by the "flipping process," which is performed with a sharp knife, by cutting through the bark into the wood at intervals along the naked roots, upward. A callous will soon form at such points, and vigorous roots will push out.

Planting.—The methods employed in planting an apple or peach are equally safe with a pear tree, with one exception, viz.: Pear trees should under no circumstances be set in the fall, as they seldom survive the ordeal of a Kansas winter.

Distance.—Standards should be set fifteen feet and dwarfs ten feet apart each way. If both classes are used on the same piece of land, set the standards twenty feet apart in the row, and rows fifteen feet apart, alternate with dwarfs in the row. But from twenty-five years of successful culture in Kansas, I would use only the dwarf class of all varieties, excepting the Bartlett and Seckel, and adopt the process of cutting them into what is known as the half-standard tree. This is done by setting the tree deep enough to bring the pear stock under the ground, from which pear roots will strike. In this we obtain the early and abundant fruiting of the dwarf, and increase the longevity of the tree.—*Kansas Farmer*.

The Codling Moth Plant.

Mr. H. C. Field, of Wanganui, New Zealand, has forwarded to Mr. T. F. Cheeseman, of the Auckland Museum, some flowers of a plant called the physanthus, which is recommended for planting in apple orchards to check the increase of the codling moth. The plant is a twiner, and blooms through the whole of the summer and autumn. The flowers are white, and very sweet-scented, producing abundance of honey, and are thus very attractive to moths of all kinds. In order to reach the honey the proboscis of the moth has to be passed through a narrow cleft, which is so shaped that, although the proboscis can be inserted readily enough, it is by no means an easy matter for the moth to withdraw it. As a matter of fact, great numbers of the moths are unable to remove the proboscis, and are held prisoners at the entrance of the flower until they die. It has thus been suggested that if plants of the physanthus were trained up the trunks of the apple trees, numbers of the codling moth would be captured and killed. The plant is a native of South America. During the whole of the past summer the flowers were loaded with dead moths. The flowers sent by Mr. Field to Mr. Cheeseman all contain dead moths.

Close Pruning of Grape Vines.

H. Hendricks, of Ulster Co., N. Y., says, in the *Country Gentleman*: I am pruning my grapevines closer and more carefully than usual this summer, and am thoroughly satisfied that they will repay me for the time and trouble. My garden is on low, rich ground, and the vine growth is tremendous. If unchecked, each vine will grow 15 or 20 feet long. This summer I resolved to stop this rampant foolishness; so I have pinched all canes at two leaves from the last cluster of fruit, and shut off every lateral at the age of one leaf, and kept them there. It was a big contract, but so far the result is highly encouraging. I never had such a magnificent display of healthy fruit before. The bunches are large and well advanced toward maturity. Not a leaf has been touched with mildew, or affected by disease in any way. The canes are thick, dark and mature, and the leaves are large and luxuriant. There is a mass of broken stubs at the ends of the canes where the new growth was pinched; but I am satisfied that this pinching has sent this extra strength, which would otherwise have been practically wasted, into the development of fruit and the buds for next year, if it has not also warded off disease to some extent. The yield of fruit is phenomenal, and I feared too much had been left on, but it looks now as if all will be handsomely matured early.

LAND best adapted to current culture is a rich alluvial soil with a subsoil of clay. The land should not be wet, but level or slightly rolling. The current is a great feeder, and one need not fear of making the land too rich. The ground should be deeply plowed and thoroughly pulverized, and marked off into rows 5½ feet apart each way. To a novice this may seem an extravagant distance apart, but it is not, and even six feet would be better than a less distance. They need to be far enough apart to allow the use of horse and cultivator freely between them. Secure well-rooted plants of one year's growth. Never set out on any conditions, currents, grapes, or any other plant grown from cuttings, more than one year old.—*Country Gentleman*.

Mr. E. G. Hill, of Richmond, Indiana, was elected President by the American Florists Convention at Chicago last week.

FLORICULTURAL.

GEORGE JACKSON, an English florist who won fame by his successful hybridizing of the climatis, *C. Jackmanii* being named for him, died at Woking, Eng., lately.

Among other curiosities of plant life exhibited at a late meeting of the Royal Botanical Society, was a leaf of the *Victoria Regina* water-lily, seven feet in diameter, showing the peculiar structure of the under side of the leaf, from which one might suppose the cellular structure of some ironclad and other large vessels was taken, the radiating ribs or veins resembling T girders tied together by deep lateral walls, forming many hundred air-tight cells, some as large as to contain ten ounces of water. A single leaf will support a weight of 400 lbs.

The *Cobaea scandens variegata* is a well known greenhouse climber, with very pretty white and pink leaves, which has a very attractive appearance when growing. If at any time the bottom of the plant becomes bare, young shoots should be trained downwards, as well as upwards. By doing this your plants have always a respectable appearance. The chief points in its culture are: syringe it freely in order to keep it free from red spider, and when potting it, or planting it out, see that the drainage is all that it ought to be.

A CORRESPONDENT of the *Country Gentleman* says he finds nothing better than hellebore to destroy the rose slug. One dose makes the voracious green rascals tired of life instantly, and the funeral is so private that you can never find a mourner. In view of this perfect remedy, no person has any right to allow his rose leaves to become skeletonized—an eye sore in the garden and unproductive of flowers. If the powder is applied when in bud or flower, all danger can be averted by drenching the bushes with water on the next or second day, if no hard rain intervenes.

C. COLLINS, a popular contributor to the *Horticultural Times*, says: Perhaps one of the greatest favorites, as a pot plant, we have is the hellebore. Nothing fills the room with such a delightful fragrance so much as plants of this. As it is well known, charming plants of the hellebore may be grown out of doors during the summer months, therefore it is as a winter bloomer I recommend this, although an occasional plant may be grown in the window all the year round. To attain success in the culture of these as winter blooming plants, cuttings should be rooted in April, and grown on during the summer in pots. To many it may seem incredible to flower this charming plant in the window during the winter, yet, but last January I saw a plant of it in full flower in a window. But as a rule it does not flower so early as this, being generally about March; but from this time to the end of November it may be had in flower with the greatest ease. It may be grown on a small trellis, or as a bush plant; for the former, every shoot of course should be tied on; and in order to grow a good bushy plant for winter and spring flowering, pot the cuttings rooted in April or May and place in the window or frame until warm enough to place out of doors. Pinch out the top of every shoot during the summer when about 10 to 12 inches high; however, should be discontinued the end of August, after which they bloom until November, if placed in a warm room; then possibly a blank of a few weeks may come, during which the plant should be kept as warm as possible to encourage growth.

Horticultural Notes.

HON. W. E. GLADSTONE took sufficient time from politics to deliver an address on "Horticulture" at the Hawarden flower show on Thursday last.

THERE is no remedy for the strawberry root borer, which borers through the crown of the plant, except the destruction of the plants, says J. J. Thomas.

THE *American Gardener* says the Concord grape needs special care in handling. Easily injured when first picked, it can be handled much better after standing from 24 to 28 hours.

If "fire blight" attacks your quince trees, cut out all affected leaves below the diseased part at once. This is the best and most effective remedy, but even this may not save the trees.

A man at Lowell, Mass., raised 1,000 barrels of cabbage on three acres of land, which he sold last winter, after bedding them in fall, at \$2 per barrel. Two hundred barrels per acre are about the average crop.

A CORRESPONDENT of the *Country Gentleman* says he finds that a fluid ounce of carbolic acid in three gallons of soup is a good remedy for bark lice on apple trees. He scrubs the trunk and branches with a coarse cloth saturated with the mixture.

To use hellebore on currants to the best advantage, begin the moment you see the first worm. Most of those who apply it begin too late, when the worms have full possession. It is very difficult then to make the job perfect, and it requires much more of the powder and far greater care in its application.

Nothing is more easily grown than a grapevine. It will almost take care of itself, if you will give it a reasonable chance; and then, having been furnished with very simple principles for three years, you can let it run over a trellis, a shed, a barn, or a trellis. Keep its feet clean of weeds, and well shod with ash and manure, and you will have enough to eat.—*The Hutchinsonian*.

Don't save seed from melons which have grown any where near a patch of squashes or pumpkins. They are almost sure to be more or less depreciated by the pollen dust from the squashes. The depreciation does not show in the melon, which may be excellent, but in the crop grown from its seed. Too much care cannot be taken in this matter.—*Orange County Farmer*.

THE N. Y. Farmer says: "It would seem as though every one ought to know by this time that cabbage will not follow cabbage on the same ground without an interval of three years or more on account of that mysterious disease the 'stump foot,' but every year some one gets caught and loses a crop because he does not believe what others tell him, or perhaps because he knows more than a newspaper can tell him."

Apianian.

SWEET clover is about the only flower which has secreted nectar in quantities sufficient to afford any adequate pasturage to bees this uncommonly dry season.

THE Middletown, N. Y., *Argus* says a swarm of bees for a year made a home in the piazza of a residence there, and on investigation it was discovered that the bees had found a way of getting under the floor of one of the bed rooms, and 50 pounds of honey and a quantity of brood comb were taken from between the floor boards.

FRANK DOUGHERTY, in the *Indiana Farmer* says: If you have empty combs, be careful that the bees do not get at them. A good way to protect them is to get one of those small balls containing spider's eggs (which you will likely find hanging in the wood-shed) and place in the hive with the empty combs. The spiders as they hatch will protect the combs from moth and not hurt them.

GEO. T. ROBBINS says, in the *Bee Journal*: It is safe to say that bees never fight except in case one party has reason to regard the other as robbers or trespassers. The entire secret of uniting successfully is to do it at a time or under circumstances when that will not occur. I never could unite two colonies safely at a time when bees are flying. Each party takes the other to be intruders, and they will fight to the death. But on a cool or cloudy day, or in early morning or late evening—any time when bees remain quietly at home—I may unite them in any way I may desire. The fact that no bees are flying—that it is no time to be out—seems to preclude the idea that either party can be intruders.

Of milliot, or sweet clover, as a honey-plant, Prof. C. E. Thorpe, of Ohio State University, says: "It will grow quite luxuriantly in hard, poor clay, where even white clover will scarcely live at all, and grows much more rapidly than red clover in any soil, while in the soils that are, as is said, 'clover-sick,' it thrives as well as anywhere. It is a good forage plant for bees and for cattle, and is well adapted for silage. But its greatest recommendation for the general bee-keeper is the fact that it requires no special cultivation, thus making it particularly desirable for road-sides and commons. Being a biennial, the seeds possess great vitality, and may be kept over for a long time, and scattered a handful at a time, as opportunity offers or a bare place develops itself. It should be sown in drills to attain perfection."

NEW ADVERTISEMENTS.

BULL'S SARSAPARILLA.

Variable appetite; faint, gnawing feeling at pit of stomach; bad breath; bad taste in the mouth; loss of spirits; general prostration. BULL'S SARSAPARILLA by cleansing and purifying the blood, restores the system, and relieves all ailments. It is undoubtedly a blood purifier, and is the only medicine that will remove the poison, supply the acids and relieve the pains. It is caused directly by impurities in the blood, usually affecting the glands, often resulting in swellings, enlarged joints, abscesses, sores, blotchy eruptions on the face or neck. BULL'S SARSAPARILLA, by purifying the blood, forces the impurities from the system.

Through the kidneys flow the waste of the body, containing poisonous matter. If the kidneys do not act properly this matter is retained, and poisons the blood, causing pain in the back, causing pain in the back and loins, flashes of heat, chills, BULL'S SARSAPARILLA acts as a diuretic, causing the kidneys to resume their natural functions.

Scrofula is a disease of the blood, caused by impurities in the blood, usually affecting the glands, often resulting in swellings, enlarged joints, abscesses, sores, blotchy eruptions on the face or neck. BULL'S SARSAPARILLA, by purifying the blood, forces the impurities from the system.

The Liver is the great blood reservoir, and is the source of all the blood in the body. If the liver is diseased, the blood is impure, and the system is poisoned. BULL'S SARSAPARILLA acts as a diuretic, causing the liver to resume its natural functions.

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On receipt of \$1.00 I will send post paid my book giving full directions for growing onions on Muck Soil. It gives directions for draining swamps, fitting them for onions, quantity and kinds of seeds to sow, implements to use, tillage, harrowing, hoeing, and selling the crop. Also a formula for a homemade fertilizer that costs only 50 cents per acre. Send postal note. Address C. C. ZAYTON, Oshkosh, Mich.

NEW ADVERTISEMENTS.

Home Evidence.

No other preparation has won success at home equal to Hood's Sarsaparilla. In Lowell, Mass., where it is made, it is now, as it has been for years, the leading medicine for purifying the blood, and toning and strengthening the system. This "good name at home" is "a tower of strength abroad."

People to print all Lowell people have said in favor of Hood's Sarsaparilla. Mr. Albert Bates, living at 28 East Pine Street, Lowell, for 15 years employed as boss carpenter by J. W. Bennett, president of the Erie Telephone Company, had a large running sore come on his leg, which troubled him a year, when he began to take Hood's Sarsaparilla. The sore soon grew less in size, and in a short time disappeared.

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Poetry.

WON IN A NEW ENGLAND PASTURE

With scattered birch the pasture slopes is crowned
The sunburst grass that clings to mountain
sides,
Cropped by small mouths of timid sheep,
scarcely hides,
Like a scant covert, the hard dry ground,
Through which, with stony ledge or rocky knee,
The strong wind breaks. The ragged ferns
that fill
Each dipple on the shoulders of the hill
Rattle with faint sharp sound if the breeze
Slips through their stems to find his mossy nest.
With soft, thick-witted leaves the mulleins
grow,
Like tall straight candles with pale yellow
glow,
Their stalks star-shaped toward the cloudless
void.
The crooning cricket with an endless song
Leaves the hot silence. The crumpling fence is
grayed
By the slow creeping lichen, held and stayed
By arms of wandering rose, that touch and
strong.

Bind firm its slipping stones. The rusty brier
And scarlet fingers of the bitter-sweet
Cast a light shade that shelters from the heat
A thousand voiceless little lives. Higher
Than maiden birch or solitary pine,
Poised in the brooding blue, on speckled wings,
A hawk hangs motionless; so straight he flings
His shadow to the earth, like the plummet line
He drops through sea of air. As in a swoon
Of light the great world lies, and life stand
still,
Wrapped in a breathless hush; till up the hill
Drift dappled shadows of the afternoon.

—Harper's Magazine.

AS HAVING NOTHING YET POSSESSED
ING ALL THINGS.

The earth is ours. Above us bends
God's infinite arch of stainless blue.
The costliest sapphire from the mines
Can never rival that in hue.

The earth is ours. Beneath us spreads
Grass greener than the emerald green.
The opal never showed lovelier tints
Than in the commonest flower are seen.

Have we no gold? The warm sunshine,
Tell me, what could more golden be?
Not all art's mysteries can make
Music like that bird in yon tree.

But on love's love? It is not lost,
But on some distant, mist-veiled shore,
Beyond life's changing, restless sea,
It shall be thine forever more.

But thou dost love? Beyond the skies
A glorious vision is waiting thee;
Strong as the eagle in its flight
Thy soul shall soar, from fetters free.

But thou dost love? Not useless they,
God's angel count every one;
They water plants of love and joy
In those far gardens of the sun.

Then do not mourn, though thou mayst be
Poor, old, bereft of all, alone—
God only waits a little while
To give thee back threefold thine own.

Miscellaneous.

The Paper Car Wheel.

The paper car wheel was the invention of Richard N. Allen, a locomotive engineer, afterward master mechanic at the Cleveland & Toledo Railroad, who took for his aim in life the production of a better car wheel than those in use. His first set of paper wheels was made at Brandon, Vt., in 1869, and after much scoffing he was graciously permitted the use of a wood car on the Central Vermont Road, under which they were tested for six months. The Pullman Palace Car Company, in 1871, gave the first order for 100 wheels; ten years after the Allen Paper Car Wheel Company, with great shops at Hudson, N. Y., and Pullman, Ill., produced and sold 13,000 in a single year. One of a set first experimented with under a "sleeper" is shown at Hudson, with a record of 300,000 miles travel. It is the body of the wheel only which is of paper. The material is a calendared rye-straw "board" or thick paper made at the Allen Company's mills, at Morris, Ill. This is sent to the works in circular sheets of twenty-two to forty inches diameter. Two men, standing by a pile of these, rapidly brush over each sheet an even coating of flax paste until a dozen are pasted into a layer. A third man transfers these layers to a hydraulic press, where a pressure of 400 tons or more is applied to a pile of them, the layers being kept distinct by the absence of paste between the sheets. After solidifying under this pressure for two hours the 12-sheet layers are kept for a week in a drying room heated to 120° F.; several of these layers are in turn pasted together, pressed and dried for a second week, and still again these disks are pasted, pressed and given a third drying of a whole month. The result is a circular block, containing from 120 to 180 sheets of the original paper, compressed to 5/8 to 4/5 inches thickness, and of a solidity, density and weight suggesting metal rather than fibre. The rough paper blocks are turned accurately in a lathe, where shavings like leather and a cloud of yellow dust fly off, to a diameter slightly greater than the inner circle of the tire. The hole in the centre is also made on the lathe, and after the paper has received two coats of paint to prevent moisture working its way within, the cast-iron hub is pressed through by the aid of the hydraulic press, and the wrought iron back plate is clamped on. The season of enormous hydraulic power now drives the paper centre into the tire by help of the level.

Honesty Its Own Reward.

Robinson—I had to discharge young Blin-kin to-day. He was not honest.

Brown—Sorry to hear so. He supports his wife and mother, too. What was the trouble?

Robinson—He found a postage stamp on the floor and kept it. He should have turned it over to the office.

Brown—Of course. By the way, it's missing. Got an extra umbrella?

Robinson—You can take my old umbrella. Here's a new one.

Brown—Hello! Where did you get that silk affair?

Robinson—That! Ha! Ha! Great joke. You see, I went into the Stock Exchange to look after a little deal in wheat. A shower came up, and when I was ready to go I just picked this up in the lobby.

Brown—Wish I had your luck. And how about the wheat deal?

Robinson—O, we skinned 'em alive, Brown, skinned 'em alive.—Omaha World.

Adventures of Tad:

HAPS AND MISHAPS OF A LOST SACHEL.

A Story for Young and Old.

BY FRANK H. CONVERSE,
AUTHOR OF "PEPPER ADAMS," "BLOWN OUT
TO SEA," "PAUL GRAPTON," ETC.

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CHAPTER I.

I was near the close of a blustering March day, and the seats about the big cylinder stove in the waiting-room of the Broad Street station in the city of Philadelphia were in great demand. One of them was occupied by Tad Thorne, who, though he had no business there, was enjoying the warmth as only a small, fourteen-year-old boy can do, after being all day in the city streets crying parlor matches at three cents per box—"two for five."

Tad's enjoyment was tempered by a little mental worry, as a matter of course. Nobody is entirely happy in this world, and as he warmly himself Tad was obliged to keep a watchful eye on the door of the porter's room opposite. It was the duty of that colored functionary to assist tramps and vagrant boys from the waiting-room, with scant ceremony.

"Last night he said he'd bounce me if he caught me here again," mused Tad, advancing first one patched shoe, and then the other toward the stove, "but I shouldn't think the corporation would grudge what little fire it takes to warm me."

For a time Tad remained in undisturbed comfort. So many persons were constantly coming and going that no one took particular notice of the thin-dressed, pale-faced lad who occasionally stretched his fingers caressingly toward the glowing coals.

"It's the first time I've been warm clear through since last August—I wish I could hold heat like a hot brick does," Tad soliloquized, as with an involuntary shiver he thought of having to start out in the chilly air again.

"Is there no other place where you can go and warm yourself, besides a waiting-room only intended for the other—patrons of the railroad?" asked a tall, aristocratic-looking gentleman, with iron-gray hair, and a very dignified manner, who occupied the next seat to the one in which Tad was sitting. He spoke severely and frowned at Tad, as though the boy's presence annoyed him.

If his address had been more kindly, Tad's reply would have been more respectful. As it was, Tad scowled a little.

"There's places enough, I s'pose—only they don't happen to 'low boys who hasn't any business there, round—specially if they ain't dressed any better'n I am," he answered, sullenly, glancing involuntarily down at himself as he spoke. The tall man muttered something about "confounded nuisance," but made no further reply. And as he rose, giving a nervous glance at the clock, Tad noticed that he wore a long gray ulster, over a very nice suit of clothes, while at one side of the seat he had vacated lay his traveling rug in a shawl-trap, and a small alligator-skin satchel with nickel-plate mountings.

Tad was wondering within himself whether he ever knew what it was to be homeless, cold and hungry when he was a boy, when his meditations were disturbed by the violent ringing of a hand-bell, accompanied by the hoarse voice of one of the railroad officials calling out something of which the words "express" and "passengers" were alone intelligible to Tad's ear. This was followed by the usual frantic rush toward the great swing doors leading into the depot. The tall gentleman sprang nervously to his feet, and, snatching up his traveling rug, shot through the doorway as though he had but five seconds in which to board a train that did not start for ten minutes, schedule time. "Hi, there!" cried Tad after him, "you've left your little satchel!" but the gentleman was beyond call. So, seizing the hand-bag from the next seat, Tad elbowed his way through the throng, into the depot, in hot pursuit of him of the flowing ulster.

Just inside the swing doors stood a policeman of imposing presence. He was a large fat man but extremely zealous, and his professional instincts were at once aroused at the sight of a shabbily-dressed boy dodging in and out of the crowd, with a nickel-plated alligator-skin satchel in his hand. Stepping hastily forward he laid a heavy hand on Tad's shoulder.

Now, after the manner of his kind, Tad regarded all policemen as natural foes to be feared—and, as far as possible, avoided. So, no sooner did he recognize the dreaded touch than, slipping eel-like from his would-be captor's grasp, Tad, with an inarticulate cry of terror, dove directly under the wheels of the nearest train.

The cars were at a stand-still, of course, but had they been in motion, I am not so sure but Tad would have acted exactly the same, so great was his fear of arrest. True, in theory, conscious innocence is generally supposed to show a bold front, but unfortunately this is not always the case in practice, particularly in an issue between a big policeman and a small boy.

Tad emerged on the opposite side of the track, with the encouraging cry of "Stop, thief!" ringing in his ears, just in time to confront the blue-coated official, who, in some inexplicable way, had reached the spot as quickly as himself.

"There he is!" shouted a young man, whom Tad had noticed in the waiting-room a little before, and, hesitating for a brief second, the hunted lad, who still clung to the cause of his trouble, sprang upon the platform of a parlor-car attached to the waiting train. Flinging open the door, he

darted in, meaning, if possible, to pass through to the other end, where, slipping off, he hoped to be able to lose himself in the crowd.

Vain hope! As he hurried between the rows of as yet unoccupied chairs, the rattle of the conductor's key was heard in the rear door at which he was hoping to escape, while the shuffle of feet, and sound of voices, at the door which he had entered, told Tad that he was fairly trapped.

Glancing despairingly about him, Tad's quick eye discovered at least a temporary hiding-place. Dropping on his knees, he crawled behind the nearest of the revolving chairs, which, fortunately for him, was the one next the door of entrance. Concealed by its arching back, Tad made himself as small as possible in the angle formed by the end of the compartment and side of the car, where he awaited the result in fear and trembling.

He heard the sound of masculine feet and the rustle of silken skirts, blended with a subdued murmur of voices as the parlor-car began to fill up. A rather stout lady, richly dressed, paused beside the chair behind which Tad was hidden.

"It is so warm here, John, I shall not need to keep my circular," she said, in a somewhat languid tone. Tad could not distinctly see the person thus addressed, but by the way he threw himself into the chair and immediately unfolded a newspaper, from behind which he vouchsafed a brief grin in reply, Tad imagined him to be the lady's husband.

Suspending her heavy, fur-lined cloak from a hook at the compartment end, the lady patted and pulled its long folds into place behind the chair-back, and for a moment Tad's heart almost stopped beating, as her gloved fingers once or twice actually grazed his hair.

But he remained undiscovered, and, better still, the sheltering garment helped to hide him more effectually



FOR A TIME TAD REMAINED IN UNDISCOVERED COMFORT.

than before, and, as his owner seated herself with a little sigh of relief, Tad chuckled gleefully as he heard the receding tread of the big policeman, who, after casting a comprehensive glance about the car, was obliged to beat a hasty retreat—because—

The cars were in motion! In his excitement the possibility of such a contingency had entirely escaped Tad's mind. He was almost on the point of scrambling to his feet and calling out to the conductor to stop the train, but, remembering the unpleasant results which would probably follow such a procedure, Tad sank helplessly back into his niche. He felt as though the chances were that the conductor would not believe his story, and he would probably be given into custody—bag and baggage—at the next station. So, of two evils, he chose the one which seemed the least, comforting himself with the assurance that the train would probably arrive at its destination very soon, when he could slip off unobserved. The voice of Tad's lady—as he mentally termed her—disturbed his perplexed reverie.

"What time do we get in, John, dear?" she asked, as she settled her feet on the comfortable hassock.

From behind his paper "John, dear," was understood to mutter that, provided the train didn't run off the track or over an embankment, they were due about eight a. m. on the following morning in the city of Boston!

"Boston, oh, gimminy crickets! I have been and gone and done it now!" gasped poor Tad, who in moments of excitement was apt to use language which at other times he rather prided himself on avoiding, because his mother used to dislike it so. Tad had a vague impression that Boston was a sort of large country town in a far-off region known as "down East." Further than this he knew not, except that it was sometimes called the "Hub," and seemed to be a sort of headquarters for culture—whatever that was—and baked beans. At least so he read in the city papers.

But, in his small way, Tad was something of a philosopher. He had not yet learned that through seeming misfortune the great Fatherhood leads his children in just the way that proves best in the end—this knowledge was to come. All he could do was to keep from useless fretting, and accept the situation as coolly as possible. Therefore, settling down as comfortably as he could, Tad gave himself up to hard thinking, and, quite naturally, his mind went backward as well as forward.

Tad's father had been a soldier in the regular army; and when, a few months before, the news had arrived that he

was killed in a skirmish with the Indians on the frontier, his mother, never very strong, had seemed to receive her own death-blow. She grew paler and thinner, till at length she had to give up work from lack of strength to run her sewing-machine, which helped to earn their daily bread. And finally, when the end came, the sale of the sewing-machine itself, together with their scanty stock of furniture, barely sufficed to pay the poor woman's burial expenses. It is a common story enough. Hundreds of broken-hearted, overworked, half-starved women all over the land have lived and died after the same fashion, and will till the millennium comes. Yet this fact does not comfort the orphans they leave behind them. Certainly, it was no comfort to Tad, who was nearly wild with grief at the loss of the one being whom he had to love in the wide world. Only for things

that his mother said to him before she fell asleep, I fear Tad would have drifted into the ways of too many of our city boys who, like him, are left homeless and friendless amid temptation and sin. But the boy had good stuff in him, and, best of all, he held his mother's memory and parting words as something too sacred to be forgotten. I do not claim that he was one of those immaculate street boys common enough in fiction, but, alas! so rare in fact. By no means. Truth compels me to state that Tad Thorne at the age of fourteen was rather rude in speech, quick-tempered and the owner of a decidedly obstinate disposition, which, however, was readily affected by kindly words. Yet, do you wonder at his faults? The only wonder to myself is that Tad did not become a really bad boy; for since his mother's death he had, as one may say, almost lived in the streets. For Tad had no home. A friendly news-vendor gave him lodgings under his periodical counter in the city post-office, in return for which Tad sold papers or ran errands. And in old moments he had managed to keep soul and body together by blacking boots, peddling matches, carrying valises, holding horses, and a score of other devices known to the average street boy.

I have mentioned Tad's faults; now let me tell you some of his better qualities. He was honest, clean-mouthed, and, generally speaking, truthful, as well as kind-hearted and generous to an extravagant degree. He had attended the night schools—attended at first by learning to read creditably, spell fairly, write legibly and cipher understandingly. But, with his superiority in many respects over the associates among whom his lot of late had been thrown, Tad, in thinking matters over, had to confess that, in a business point of view, he had been any thing but a success. The truth is, Tad was not sharp or unscrupulous enough to compete with his fellows; but this fact he did not recognize.

"I guess I'm not one of the lucky ones," he murmured, rather ruefully, as he mentally reviewed his many business failures, while the swift train, which was bearing him away from the scene of them all, to fresh fields and pastures new, went thundering on through the darkness toward Boston.

Boston! As Tad's thoughts reverted from the past, the name repeated itself over in his mind. "Seems as though I heard mother say once that I had an Aunt Rhoda who lived in Boston, or Bangor, or—anyway, it was a place that began with B, somewhere 'down East,'" mused Tad. Not that he hoped, expected or even desired to meet this, the only relative he knew of in the world. It was enough to remember that she had never held communication with Mrs. Thorne since her marriage to some one whom her older sister Rhoda did not like. And a slight offered to his mother was in Tad's eyes an unpardonable offense.

But so much thinking, together with the warmth of the steam-heating pipes at his back and the even, un-rushing movement of the train, began to make Tad drowsy. Peeping out of his hiding-place, he could see that many of the passengers were disposing themselves for uneasy sleep, and, judging by certain sounds from the chair in front of him, Tad's lady was already in dream-land. So, leaning his head back against the fur-lined cloak which had already served him such a good turn, and, probably being given into custody—bag and baggage—at the next station. So, of two evils, he chose the one which seemed the least, comforting himself with the assurance that the train would probably arrive at its destination very soon, when he could slip off unobserved. The voice of Tad's lady—as he mentally termed her—disturbed his perplexed reverie.

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"I guess I'm not one of the lucky ones," he murmured, rather ruefully, as he mentally reviewed his many business failures, while the swift train, which was bearing him away from the scene of them all, to fresh fields and pastures new, went thundering on through the darkness toward Boston.

Boston! As Tad's thoughts reverted from the past, the name repeated itself over in his mind. "Seems as though I heard mother say once that I had an Aunt Rhoda who lived in Boston, or Bangor, or—anyway, it was a place that began with B, somewhere 'down East,'" mused Tad. Not that he hoped, expected or even desired to meet this, the only relative he knew of in the world. It was enough to remember that she had never held communication with Mrs. Thorne since her marriage to some one whom her older sister Rhoda did not like. And a slight offered to his mother was in Tad's eyes an unpardonable offense.

But so much thinking, together with the warmth of the steam-heating pipes at his back and the even, un-rushing movement of the train, began to make Tad drowsy. Peeping out of his hiding-place, he could see that many of the passengers were disposing themselves for uneasy sleep, and, judging by certain sounds from the chair in front of him, Tad's lady was already in dream-land. So, leaning his head back against the fur-lined cloak which had already served him such a good turn, and, probably being given into custody—bag and baggage—at the next station. So, of two evils, he chose the one which seemed the least, comforting himself with the assurance that the train would probably arrive at its destination very soon, when he could slip off unobserved. The voice of Tad's lady—as he mentally termed her—disturbed his perplexed reverie.

it till I find out," was Tad's final decision. He would no more have thought of forcing the lock to satisfy curiosity than of breaking open a money-drawer.

A general stir among the passengers, together with certain fragments of conversation which reached Tad's ear, warned him that the end of his journey was at hand. Mrs. John Mason was among those who began getting in readiness for departure. As, detaching the cloak from the hook, she withdrew its rich folds from behind her chair, Tad lightly touched the soft fur of the lining by way of a mute farewell; after doing which he began making his own preparations for leaving. That is, he buttoned his thread-bare jacket tightly about him, ran his fingers through his mop of curly hair and pulled a shabby cloth cap well over his forehead. Then, with a fast-beating heart, Tad awaited the finale.

The end was not long in coming. As the city clocks announced the hour of eight a. m. the train slowly rumbled into the depot, at the foot of Summer street, and came to a full stop with the customary jolt which bumps together the passengers who stand expectant in the aisle.

Then followed the usual rush for the doors, during which Tad crept from his hiding-place unnoticed in the general confusion. Carrying the satchel in his hand, he boldly elbowed his way through the crowd, and, with a great sigh of relief, found himself standing



TAD CREEPT FROM HIS HIDING PLACE.

on the platform unquestioned. As he was on the point of turning away Tad suddenly observed a young man whom he remembered having seen at the Broad Street station on the previous evening. A small bluish scar above his right eyebrow had first attracted Tad's attention, while the person in question was standing by the stove, quite near his own seat. At the time, Tad had vaguely wondered whether the man might not have been a soldier, like his own father, and, perhaps, been wounded by a bullet in the same battle.

"Yes, sir," thought Tad, closely eyeing the stranger, who, in turn, was sharply scrutinizing those who were leaving the cars, as though watching for some fellow-passenger, "that's the same identical chap, and, what's more," he added, with growing interest, "I believe he's the very fellow who hollered 'There he is!' when I popped out from under the car. I remember him by his gold-mounted teeth, too."

For this young man, who wore a sort of chronic smile, as though pleased with his own thoughts, made a frequent display of some artistic dentist's handiwork. But the current of Tad's thoughts took a suddenly unexpected turn.

"Sure enough," he muttered, audibly, in answer to an inward suggestion; "it's the likeliest thing in the world; why didn't I think of it before?"

Acting upon a hasty impulse, Tad approached the object of his conjecture, and touched his elbow. "Say, mister," he eagerly asked, as the young man started violently, "you hain't seen nothing of a tall party in an ulster coat down to his heels, carrying a blanket done up in a shawl-trap, anywhere aboard this train, have you?" A curious look of interest—I had almost said exultation—flashed across the stranger's face as his sharp gray eyes, which were set curiously near together, seemed to take in Tad, his shabby clothes and the small satchel, at one comprehensive glance.

"What do you want to know that for?" was the response, given in a pleasant voice.

"So's to see whether you knowed or not," guardedly answered Tad, who, for some reason not plain to himself, had already repented his impulsive question of the moment before. The stranger was well dressed and well appearing, but Tad's contact with the "seamy side" of life had made him rather distrustful of men and their motives, and with his new acquaintance at Tad's not overpolite reply, the young man smiled more agreeably than ever.

"See here, my good lad," he said, genially, "that little bag in your hand looks considerably like one that the party you were asking me about—who,



"SEE HERE, MY GOOD LAD," SAID MR. JONES.

by the way, is a particular friend of mine—left on the settee at the Broad Street station, Philadelphia, in his hurry to catch this very train that we have both returned to Boston in, and you," patting Tad pleasantly on the shoulder, "are the honest boy that I saw pick it up and run after the owner to return it

to him. But how happens it that you have not found Mr. Richards—my friend's name—you must have come on with us, and so?"

Here Mr. Jones stopped abruptly, and began staring very hard at the few remaining passengers who were running the gauntlet of a throng of pennied-up hackmen, vociferating in different keys.

"Why, confound it!" he exclaimed, "here I've been standing talking, and let Richards march off up-town, or stop a minute! The satchel must contain something of more than ordinary value—a fact which the fraudulent Jones had in some way discovered, else why was he so anxious to get possession of it?"

Which reasoning resulted in Tad's investing half his stock of ready cash in the purchase of three daily papers, in whose columns he hoped to find possible mention made of the lost satchel. The purchase itself decided the direction of his steps. He knew that about twenty city wharves were sheltered and sunny spots, where he could sit down and glance over his papers undisturbed by officious policemen.

Having been duly directed by a sharp-voiced newsboy, Tad began making his way wharward, through a narrow and not particularly inviting street, known as Lewis Lane. The theory of cause and effect was visible on every hand, in the shape of flourishing liquor-shops and miserable tenements. Shabbily-dressed men lounged on every corner, filling the air with oaths and tobacco-smoke, while shrill-voiced women gossiped in the doorways and swarms of dirty children paddled in the gutters.

"Come, now—you give us that purp!" said a threatening voice, and Tad looked suddenly round. A very ragged boy, whose hair was cut close to his bullet head, stood confronting a neatly-dressed girl, rather younger than himself, who, from her appearance, was evidently a stranger in the neighborhood.

"Ay ye don't hand 'im over, we'll take 'im away from yez in less'n two shakes," chimed in aibernian voice, whose owner was a red-haired youth of fourteen summers or thereabouts. In his dirty fingers was a string from which dangled an empty cigar, as destined, as Tad at once saw, as an attachment to the tail of a small and decidedly dirty dog which the girl was hugging tightly against her white apron, very much to its detriment.

The young and unprotected female compressed her lips, and, looking quizzically at her opponents, declined to reply to their amiable intimations. But Tad thought that she also glanced at him rather anxiously, as though fearing he might array himself on the side of the foe.

"Sure, I wudn't be afeard of a gurrl, Bob," scornfully insinuated the red-headed, in an undertone, and, thus stimulated, Bob took a step forward, but Tad was too quick for him.

"Look here!" exclaimed Tad, feeling his blood tingling clear to his fingertips as he placed himself directly in front of Bob, the short-haired—"you just leave that girl alone, will you?" And, tucking his satchel under one arm, Tad threw himself into an attitude both offensive and defensive, which was calculated to strike terror to the heart of the onlookers.

"Wasn't a-toughin' of her—was I, Mickey Blane?" returned Bob, stepping back in evident alarm. "Well, though, if she don't give me my purp!" he added, with a threatening shake of the head, encouraged at the sight of his friend, who, after carefully turning back his tattered shirt-cuffs, was rapidly revolving a pair of red fists with a view of paralyzing the bold intruder by his own display of science.

"I don't care," undauntedly replied the small female, speaking for the first time; "it's not your dog, and I won't give him up—there, now!" And I regret to say that Miss Polly Flagg further emphasized her declaration by stamping a small foot on the pavement with considerable force.

"Don't worry, miss!" said Tad, reassuringly. "They won't dare lay a finger on you—or the dog, either—while I'm here; and there's a policeman just coming round the corner, too." The latter information intended for the ears of the two warlike youths, having an immediate effect. Mickey thrust his

Tad, who was stout-hearted and swift-footed, rather unexpectedly confronted Mr. Jones on the pavement in front of the restaurant, just as he was halting a bus. "I say!" cried Tad, excitedly; "none of that, you know—give me back my satchel!"

Mr. Jones started, stared very hard at Tad, as though he were trying to remember where he had seen him before, and then looked at the satchel in his hand. "Well, I declare!" he exclaimed, in seeming surprise, "I must have taken this up in a fit of abstraction and walked out, without thinking of you at all, my lad."

Tad shrugged his shoulders. "I want my satchel," he said, stoutly, as a little knot of people began to gather. "Your satchel," repeated Mr. Jones, with a shadowy sneer; "come, now, that's too!"

"At your old games again, are you, Edwards?" interrupted a quietly authoritative voice. Its owner was a small, thin-faced man, in citizen's dress, who, stepping forward as he spoke, gently touched Mr. Jones' shoulder, to that gentleman's visible discomfort.

"Is this yours, boy?" continued the speaker, addressing Tad and touching the satchel with the tip of a small whalebone cane.

Tad nodded eagerly. Strictly speaking, it was not his, but, for obvious reasons, Tad forbore further explanations.

"Hand it over," said the small man, briefly, to Mr. Jones, who complied so promptly as greatly to astonish Tad, and then, obedient to a gesture from him of the cane, the fraudulent Jones vanished with considerable celerity round the nearest corner, while the small man walked quietly away.

"That's City-Detective Blossom—he's been in our place lots of times," Tad heard a telegraph messenger-boy inform another, in awe-struck tones, and, after admiringly watching the small man out of sight, the two scampered off together.

"Strikes me that my friend Jones won't get hold of this same little bag as easy as he thought for," chuckled Tad, unconscious that the gentleman in question, with his hat pulled down over his forehead like the villain in a

play, was watching his movements from a neighboring doorway.

But whither should Tad turn his foot-steps? Up-town or down-town, or stop a minute! The satchel must contain something of more than ordinary value—a fact which the fraudulent Jones had in some way discovered, else why was he so anxious to get possession of it?

"Chaps like him don't take the chances on an empty bag," soliloquized Tad, with a wise shake of the head, "and, according to my way of thinking, somebody'll be offering a reward for this bit of property before long!"

Which reasoning resulted in Tad's investing half his stock of ready cash in the purchase of three daily papers, in whose columns he hoped to find possible mention made of the lost satchel. The purchase itself decided the direction of his steps. He knew that about twenty city wharves were sheltered and sunny spots, where he could sit down and glance over his papers undisturbed by officious policemen.

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RURAL JOYS.

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still so weak that I could scarcely move a finger. But I recovered rapidly and then they told me the awful details. Both engineers and the conductor of the passenger train as well as sixteen passengers had been killed. The list of injured ran up to nearly fifty. The trains had met on a curve, and the passenger had been thrown over an embankment thirty feet high. The coroner's jury had heard all the details and had exonerated me, although I tell you now I would rather at that time they had hanged me. All through my sickness my sweetheart watched over me and nursed me, and when I recovered she was kindness and consideration itself. But I was in no mood for love-making.

"As soon as I was able to leave the hospital I went to Pittsburgh, and from there I came out here, intending to stay a month or so, till my nerves would get stronger. I stayed all summer, and then it was so quiet and secluded here that I built me this little cabin and I've been here ever since.

"How do I live? Well, I had a little money in the bank and it don't cost much to live up here. When the money's all gone, I reckon I'll be ready to go myself. I go to Uniontown or Conneville once in a while, but outside of those places I have not been away from here for ten years."

"Tad-Bits."

An Operator's Fatal Mistake.

Away up on the slope of the Allegheny Mountains, four or five miles from Uniontown and only a few steps off the line of the old Cumberland pike, a little plain board cabin stands. It isn't much bigger than a good sized dog kennel and it is set so far back among the rocks and trees that it cannot be seen more than 100 yards away. But there is a cleanly, homelike air about the place that speaks as positively as words of the refinement of the owner.

The owner himself is somewhat of a mystery to the great majority of the simple minded mountain folk who live in that vicinity, but to the select few who enjoy his confidence he is a friend whose friendship is as solid as the rocks on which his little home is built. A Pittsburgh Dispatch reporter, rambling over the mountains last week stumbled all unexpectedly upon the secluded dwelling. The occupant was sitting in a homemade hammock just outside the door, adjusting a fish line to a pretty jointed rod. A daily paper lay on the ground at his feet.

He was a young man, not more than thirty years of age, but his hair and moustache were as white as silver, and there was an expression of sadness on his face which seems to be habitual. His clothing was old and worn, but it was kept neat and for all that, and it was worn with a grace that is not born in the mountain districts. He welcomed his visitor as heartily as though he had known him for years, and his invitation to take a seat and rest almost amounted to a command. During the course of the two hours' conversation which followed he told the sad story of his life and the combination of circumstances which led him to leave the habitations of men and go away into the mountain by himself.

"I was raised and educated in Pittsburgh," he said. "I learned telegraphy in the Western Union office, and when not yet twenty years of age was put in charge of an office on a railroad out in Ohio. It doesn't make any difference what office it was (what road it was on, it was an office and a rather important one at that. I hadn't been in my new position more than six weeks when I fell desperately in love with a girl who lived only a block from my office. The attachment was mutual, and when six weeks had lengthened into six months we were engaged. One night—it was in February, 1877—I had been to see my sweetheart and about midnight was sitting in my office thinking of the coming wedding, and feeling as happy as any young man with bright prospects ahead of him could feel, when word came over the wires that a special freight was coming over the main track westward. It was still thirty miles away, and after recording the fact that it was coming my thoughts returned to the little girl down the street.

"Ten minutes later the conductor of the East-coast express came in for orders. 'All right, Bill,' I said, as I glanced up and saw him, and a minute later he was on his train, speeding away at a twenty-five-mile-an-hour gallop. The rear lights were scarcely out of sight when I happened to look at my desk. There was nothing there but my instrument and a bit of paper, but that bit of paper was enough. There, in plain letters on it, were the words I had written not more than a quarter of an hour before, 'Extra freight, tell Bill to sidetrack.' The express has to sidetrack, you know, because the switches were not long enough for freights. My hair fairly stood on end. There was that freight coming on with full steam, with the express going at the rate of twenty-five miles an hour. I fell back in my chair, and the cold perspiration broke out all over me. Then I grasped the key to my instrument and called in succession all the offices intervening between the two trains. They were all day offices, and the operators had gone home hours before. The clicking of the instrument sounded to my excited imagination as loud as the discharge of cannons. For five minutes I called in the desperate hope that some one would hear me in time to stop the express. But it was no use. Every office was closed.

"I dropped the key and ran down the stairs and out onto the track. I think I had a wild hope that I could overtake the express, but as soon as I got into the open air I realized the folly of any such attempt, and, with the feeling of most utter despair, I returned to the office and dropped into the chair. But I couldn't keep still. The instrument on the desk seemed to mock me and the air in the office seemed stifling. I walked out on the track again and walked back and forth along the cross ties, waiting for the result. I knew it must come and I instinctively started within hearing distance of the instrument.

"I seemed an age, but in reality it wasn't more than half an hour, till the sounder clicked and I ran up stairs, hoping beyond hope that some lucky circumstance had averted a disaster. I was so nervous that I could scarcely hold the key to answer. Then I laid back and waited as the instrument clicked what seemed to me to be my death sentence. 'Express and freight closed. Nineteen killed; many injured.'"

"Two weeks later I regained my senses. I had been hovering around between life and death during the interval and I was

Instinct of an Old Rat.

On a very warm day in early summer I happened to be standing near a chicken coop in a back yard when I noticed the head of a very gray and grizzled rat thrust from a neighboring rat hole, and concluded to watch the movements of the veteran. After a careful survey of the surroundings, our old rodent seemed to be satisfied that all was right, and made cautious exit from the home retreat. A fresh pan of water had been recently placed before the chicken coop, and the water looked a friendly invitation to the thirsty old rat, which immediately started toward it.

The rat had not reached the pan before five half-grown ones rushed ahead and tried to be the first at the water. The old rat thereupon immediately made a leap like a kangaroo and was at the edge of the dish in advance of the foremost of her litter. Then ensued a most remarkable occurrence. The mother rat raised herself on her haunches and hit and scratched her offspring so severely whenever they attempted to reach the water that they all finally scudded away, evidently very much astonished and frightened at the strange and unaccountable behavior of their mother. When the little ones were at a safe distance the reasons for her extraordinary behavior began to be revealed at once in the intelligent action of the old mother rat.

She first wetted her whiskers in the water, looked suspiciously about her, then very cautiously and carefully took a dainty little sip of the liquid. She tasted it as tentatively and critically as a professional tea-taster, and when she was satisfied that it contained no poisonous or other deleterious matter she gave a couple of squeaks which quickly brought her young and thirsty brood to her side, and all fearlessly drank to their fill. Does not this look very like reason.—*American Naturalist.*

The Piazza Was Cold.

"Have you heard about the Seaford man who never used a sleeping-car until the Norfolk line down the peninsula was opened?" asked a railroad conductor of a newspaperman the other day. He replied he hadn't, and the conductor continued: "Well, it sounds a good deal like a fish story, but it's true. This Seaford man—I won't give him away—was on his way home from his first visit to New York. He had never been on a sleeping-car before in his life, and he seemed to be considerably mystified concerning its interior arrangements. He was too proud, however, to ask any questions. The berths were, of course, all in order for their occupants, but something seemed to be amiss to our unsophisticated passenger. He was the first to make preparations for bed, but he did it with a great deal of deliberation. He sat down on the lower berth, pulled off one boot, and then glanced anxiously around. It was fully five minutes before the other boot came off, and when it did he had solved the problem. Pushing his boots under the bed he started for the rear platform and nothing was heard of him for some ten minutes. Then he put his head in at the door and called out: 'All you in there look out, for I'm a coming!' And he did, too, with a rush. He had undressed out on the platform, made a bundle of his coat, pants and vest, and as he shot into his berth after a dash up the aisle, he remarked, half aloud, to himself: 'Dod darned, ef twarn't kind of cold out there on that blasted piazza.'"

The Alps Above the Venetian Plain.

There is always something delightful in a climb up the great slopes of the Southern Alps. The gradually expanding view of the south; the faint suggestion of the sea that lies beyond; the rapidity and beauty of the form in the mountain contour—it is this conjunction of mountain and plain, together with the fact that the Italian side is the esplanade of the Alps, which gives to the southern Alps that superiority over the Swiss Alps which they undoubtedly possess. On the Swiss side there is so little variety; you have only a sea of mountains round you, more or less grand. On the Italian side you get the vast sweep of solemn plain, in contrast to the relief from the monotony of the mountains.

Up and up the road continued to wind, till it reached the little osteria of the Baracate, perched high above all the windings of the Costa. Evening was coming on; the rain had stopped. All the plain lay stretched out beneath us; every curve of its undulations defined in varying tones of blue, like a mirror, reflected the opposite peaks; absolute silence all about us, and a brooding sense of heavy clouds in the air. Then as we turned the corner, and bade adieu to the plane, the whole landscape suddenly changed. We were no longer in Italy; it was up some Scottish Highland glen that the road wound, gradually becoming more and more obscure as the night enveloped us.

Then the rapid descent upon the plateau of Sette Comuni; but it was too dark now to distinguish the nature of the country around us, and presently the lights of the Asiago and the Croce Bianca gave us a

pleasant welcome to the capital of the Seven communes.

We were fortunate in finding for company at table the officers of an Alpine regiment. These Compagnie Alpine are a branch of the service of which Italy is justly proud. The men are chosen from the Alpine towns, and are a magnificent set of troops, splendidly trained to their business, which is the protection of the Italian frontier. In the winter they are cantoned in the large towns at the foot of the Alps—Belluno, Conegliano, Verona; but the summer months they spend camping out among the mountains, studying the "lay" of the valleys and getting the various paths across the mountains by heart. Their duty takes them into wild places, and many were the stories of adventure that the captain had to tell.

One in particular struck our fancy. The captain was with his company at Agordo, and wished to take his men for a march round the Palle di San Lucano. At the inn he offered 30 francs for a guide, but no one would close with the offer, the difficulty of the walk being well known. While the discussion was going on, in came a tall young fellow famous for the airs he gave himself. Hearing what was on foot, he turned to the captain and said, "Signor Capitano, I will take your offer; but, mind you, where I go none of your men will follow me." This challenge put the captain on his mettle. Selecting 30 of his best men, he started the next morning with his guide. The young fellow led them up and up, purposely missing the true path, until he and the 31 soldiers behind him were clinging to sheer precipices of San Lucano; then he turned and said: "Signor Capitano, I have missed the way. Tell your men to go back. I will go across this place and meet you lower down."

The captain, in a rage, gave the order to go back; and the soldiers began feeling their way backwards along the cliff, not daring to turn round. The guide set off by himself; but he had not taken two steps when a rock on which he had laid his hold gave way, and he fell. The soldiers turned pale as death; but the captain said: "Sergeant, you saw him fall; go down and fetch him," and the sergeant did. When he got to the foot of the cliffs he found the mangled body of the guide, whose own words had come so true, "Where I go none of your men will follow me."—*Pall Mall Gazette.*

A Sacrifice to Style.

The trials of a "willow" girl in a tailor-made gown are thus minutely described by a New York Society correspondent:

"Jennie's traveling rig was perfect to look at. She had a sling-sleeve wrap of ecrú pongee, a material that shakes round and makes believe to be cool. She had a pin-head, check-cloth, tailor-made dress and a love of a traveling hat of smoke-colored chip, with a crimson bird sitting on its ridge-pole, surveying the slanting sides of straw, that looked for all the world like a slated roof. Jennie was tired from her ride, and Emma and I helped her to get off her things. I never was so shocked in my life as when I beheld the condition of that poor creature. As I think of her on the hot, dusty cars, the tears come into my eyes. The dress waist was lined with thick twisted silk, and was boned till you couldn't put your finger on the lining between the seams. It was padded over up into the shoulder like the front of a cavalry officer's coat. The sleeves had two thicknesses of sheet wadding on the under side and one on top, between the check stuff and silk lining. It was like looking into a gas pipe to gaze down those dark little stuffed sleeves. I laid the waist on a chair, on its back and its shape remained as in life, while the sleeve stuck up as if it was drowning and wanted a helping hand. Attached to her dress skirt was a massive panier to complete the stick out. If ever a poor rack of girl suffered for the sake of looking well it was that unfortunate Jennie. When we got what there was of her out of that harness, she sat down in a thin wrapper to cool her bones by the open window, and we could hear them rattle as the wind blew in.

Great is Barabbas.

The "buddlers" came down like the wolf on the fold. And they scooped in the silver and greenbacks and gold; from the town on the lake to the town by the sea, they raked in the bodole from A unto Z.

The people were stupid and silly and green, and the "buddlers" the cheekiest thieves ever seen; in the street, in the office, by night, and by day, they grabbed what they wanted and took it away.

They laughed when the newspapers gave them a blast, and they winked in the face of the judge as he passed; for they knew, while this land should be peopled with men, that "buddlers," who'd "buddled" would "buddle" again.

People put them in prison, but then, all the same, Elected new "buddlers" to keep up the game, From Tweed to McGargile—who but believes it's the fate of the land to be governed by thieves.

Pickpockets and gamblers, thieves, drunkards, and toughs, Ex-convents and singers, bartenders and roughts, Forgers, fences, and liars, and confidence men We've elected to office again and again.

And we'll do it again; we'll let people see There's a chance for the thief in the land of the free; Long live S. Barabbas! A pledge let us borrow—To the health of good Sodom and righteous Gomorrah.—*R. J. Burdette.*

"Secondary" Inebriation.

In no class of people does heredity do a more disastrous work than in the descendants of drinkers, whether excessive or moderate. A morbid appetite for liquor in such cases, with the disadvantage of an inherited nerve degeneration, may manifest itself in many terrible forms. Among these many forms are the ordinary symptoms of intoxication in a person perfectly temperate. Dr. Crothers, of Hartford, Conn., presents a case in a paper read before the American Association for the Cure of Inebriates, and published in the *Allenist and Neurologist*.

The first cases that attracted his attention were two boys, sons of drunkards, in the Hartford Deaf and Dumb Asylum, who had shown clear signs of intoxication from their

birth. He was afterwards surprised to find such cases not uncommon.

In a certain class of cases, almost any excitement is sufficient to bring on an attack of "secondary" intoxication. A farmer, fifty-four years old, a man of wealth and character, whose father was a drunkard, but who himself never used any kind of spirits, showed symptoms of intoxication after meeting with an accident from a runaway horse. At the funeral of a child, some months later, his family were greatly mortified at his silly language, staggering gait, and other marked symptoms of intoxication. A year later a similar attack followed the burning of some buildings on his farm.

There are similar cases in which the nerve degeneration is due, not to heredity, but to early habits of intoxication. A noted temperance lecturer, a total abstainer for ten years or more, received while lecturing a dispatch announcing the fatal illness of his daughter. He drank a glass of water, became confused, staggered, and was led from the stage laughing and shouting in a maudlin way. He had drunk no spirits, but the audience supposed him intoxicated.—*Youths' Companion.*

Growing Cooler.

It is the opinion of scientific minds that the sun is cooling down; yet people are going about the streets in mere seersuckers and straw hats, and even in shirt sleeves. It is now well established that the sun is not a burning fire, but is merely a fluid mass cooling, with some little accession of fresh energy by meteors occasionally falling in. "Of very small account compared with the amount of heat the sun steadily loses." The theory that the sun shrinks because it gets cooler, and that the process of shrinking makes it hotter, has misled many good people. So they eat ice cream and drink cool lemonade and so-called soda water, and wear gauze underwear and fan themselves and that sort of thing.

But the latest conclusions of science show that the sun is still cooling down, and the scientific man can figure out that yesterday was a cold day, and that during those two July weeks we should have had the furnaces going and put on fur mittens and ear-muffs. A man has only to fill himself up with the conclusions of science in order to correct the notion that the weather is warm. As the sun is growing colder—the mutual gravitation of its particles as it shrinks, giving rise to less heat than it lost by radiation—it is manifestly impossible that the weather should be as hot as the lying thermometer declares.

It is easy to prove by any faith-healer that if a man once makes up his mind the weather is cold his collar will no longer drop in dampness about his throbbing neck, the perspiration will cease to run in streams down his back, and he can be comfortable only with a fur overcoat and fur cap and woolen hose.

VARIETIES.

JUSTICE FIELD WOULD NOT SIGN.—A rather spare old gentleman, with thin grayish whiskers and wearing a pair of highly polished spectacles, leaned over the counter in the Southern Pacific Company's uptown ticket office Monday morning, and asked for a round trip ticket to Portland.

"Thirty dollars," promptly responded the clerk.

The passenger laid the coin on the counter and the clerk pulled the ticket out of the case and handed it toward him with a well-linked pen.

"What is that for?" asked the passenger with a touch of contempt in his tone, and glancing toward the pen.

"Sign there, please,"

"I beg your pardon."

"Sign the ticket, please."

"No, sir; I refuse. There is no law in the United States compelling me to sign a railroad ticket. There is your money. Give me the ticket."

The somewhat ruffled agent looked at the passenger and then at the ticket, but did not touch the money.

"What is your name, sir?" he asked at length.

"Stephen J. Field," was the reply.

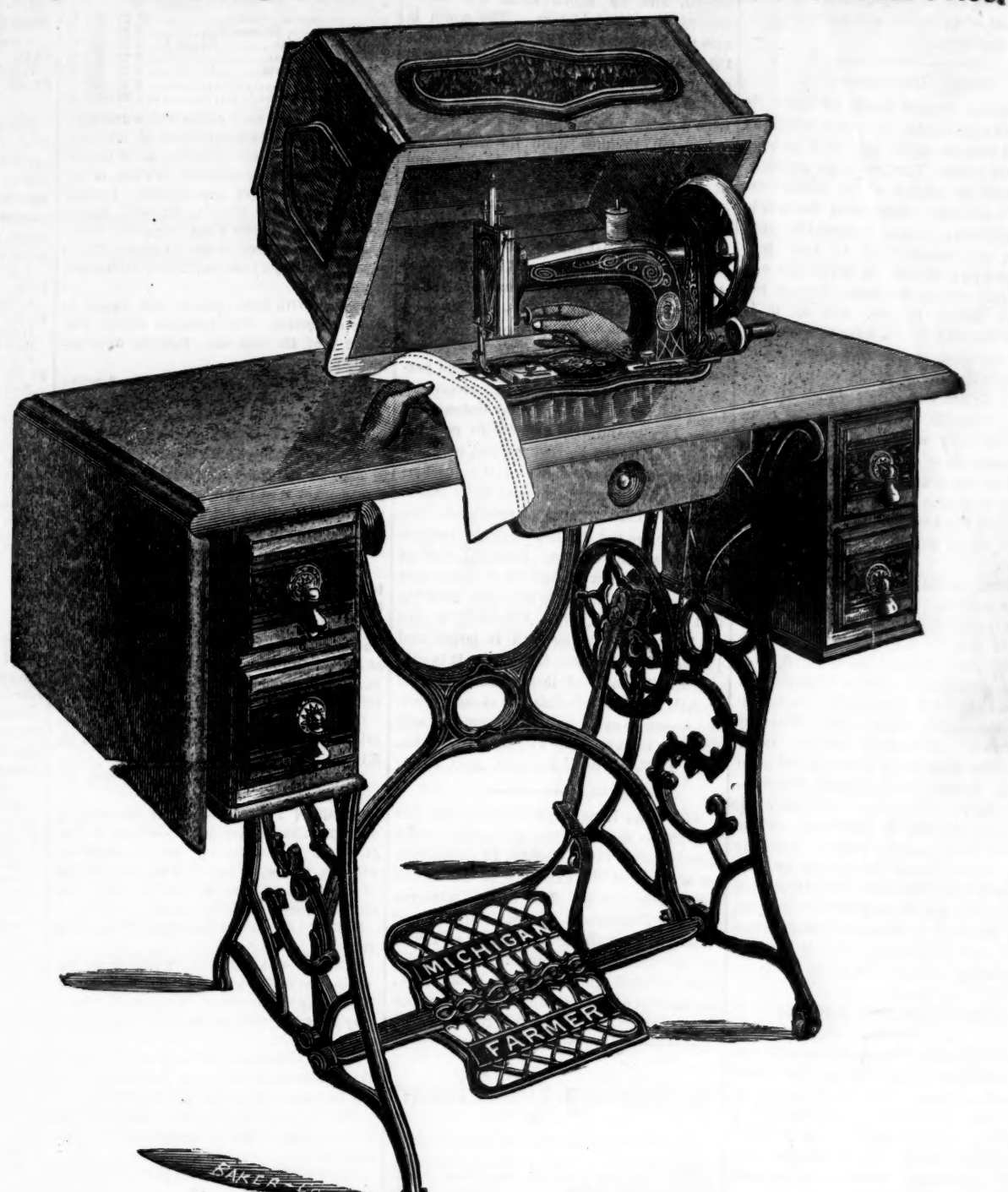
Then it dawned upon the rather dazed mind of the young man behind the counter that he was talking to one of the justices of the Supreme Court of the United States. He quietly stamped the unsigned ticket, handed it to the passenger with a subdued air, and as he put the money in the drawer he was observed by the bystanders to be in a very reflective mood.—*San Francisco Chronicle.*

A New York lady, whose name is the synonym for all that is benevolent and charitable, especially regarding the helpless and poverty-stricken of her own sex, has her summer home in one of the most beautiful spots on the Hudson, surrounded by forest trees of great age and magnificence. It occurred to her last autumn that it would be kind to give to a party of city working girls an opportunity to go "cheatstrutting" on these grounds. But as a matter of fact the chestnuts were in their very scarce; yet not to disappoint the girls, a servant was sent to the city with instructions to purchase a bushel or two of the nuts and scatter them around under the chestnut trees where they would be most likely to be found by the visitors. They were found by the merry-hearted young women, and their hostess would have derived great satisfaction from their enjoyment and the success of her benevolent little fraud if she had not chanced to come upon several of them sitting under a tree that clearly was not chestnut, and heard one of them, who must have some time lived in the country, discoursing after this fashion as they nibbled the nuts: "I say, girls, I can't understand yet how those boiled chestnuts come to grow on an oak tree! They don't say 'chestnut' in that household now; they say 'boiled oaknut.'"

ONE of the most absent-minded of men, a most worthy minister of the Gospel, lived and died not long ago in a town not far from Concord, N. H. He once called on a lady parsonage and invited her with characteristic politeness to go to rice. She accepted readily, and when they reached the door that he had made the call on horseback, and that his chaise was at home half a dozen miles away. The horse was often led to a brook to drink. One morning the loafers on the piazza of the village were dumfounded to see the parson come out of the barn with the halter dragging from his hands folded behind his back, pass slowly down to the brook, then turn and look at the horseless halter and hasten back to the barn where thirty old Dobbin in his box-stall was plying his kind, forgetful old master.

BUY THE BEST AND SAVE MONEY!

A Splendid Sewing Machine with All Attachments at 1-4 Usual Price.



The above represents the Machine which we sell at \$17 CASH, AND THROW IN A YEAR'S SUBSCRIPTION TO THE FARMER. It is very nicely finished, perfect in all respects, and guaranteed to give satisfaction. We are contracting for large quantities and furnishing them to our customers at about cost. Agents and dealers profits can be saved and one of the best Machines obtained by ordering of us. A full set of attachments included with each Machine, which is guaranteed to give satisfaction or it may be returned and Money refunded.

Address

GIBBONS BROTHERS,

Publishers Michigan Farmer, Detroit, Mich.

DIFFERENT METHODS OF TEACHING.—A reporter walked behind two diminutive school-boys on their way to school last Wednesday morning and overheard the following conversation:

"Teacher's name?"

"Miss Sumthin' or ruther. I forget."

"Naw. I mean what's her ruther name?"

"Oh, we call her Stump," cause she's so short."

"Does she jaw or taffy?"

"Le, she taffied yesterday till Hank Gibbs split some ink all over her white dress," then, Gee Christopher! y'oughter heard her jaw. Your teacher jaw!"

"Naw, she don't jaw."

"O jolly, that's great. Taffies all the time eh?"

"Hush! Well, what does she do?"

"Licks."

A LADY walked into a city store a few days ago and inquired for the carpet department, to which she was conducted. "You see," she explained, "I bought a piece of carpet here for my parlor, and Samuel, my husband, says nothin' 'll do but we must have more like it. So I want to get the remnant. I don't remember the clerk that waited on me, but I'd know the carpet if I set eyes on it."

Three clerks were kept busy an hour and a half unrolling carpeting for her identification, but the desired remnant didn't come to light. "Dear me, this is very disappointing,"—Can't you help a gentile (sic) man find a bough that'll fit this (hic) lackey?"

"And so your father has gone to a missionary station?" "Yes; we are quite alone now."

"Don't you miss the directing hand of your household?" "O, mother didn't go."

Related Inebriate—I shay, stranger! Sober Party—Well, what do you want? Inebriate—Can't you help a gentile (sic) man find a bough that'll fit this (hic) lackey?"

Henry George says that there is work enough in this country for every man to have a job. Wouldn't it be a good idea, then, for George to go to work instead of wasting his time in talk?

Many a young bride has sobbed herself to sleep because, when she showed her husband her first angel cake, he was stupid enough to ask how she happened to break off the end of the mantelpiece.

Little Dick—I don't want to do that. Mamma—But you must. Little Dick—Why? Mamma—Because I say so. Little Dick—What's the reason I have to mind you? I ain't your husband.

"Ma," said Bertie, "should I say 'pants' or 'trousers'?" "Trousers, my dear," said the mother. "Well, then," said Bertie, "I think Bridget had better give Fido some water; he trousers awfully."

The ballet girls of the National Opera Company have sought redress again in the Chicago courts against their employers. The last time they were seen in public it struck many people as if they needed re-dressing.

Blobston (to Popinjay, in carriage)—Well, I declare! you have come out with gray hairs for your head since I saw you last. Popinjay Don't doubt it. I have been waiting for my wife to come out of this dry goods store."

Mamma (to Walter, who has just returned from his first experience with a fishing rod)—Walter, how do you like it? Walter—Yes; I thought I'd come home. The worms were so nervous I couldn't get them on the hooks.

A three-year-old boy, who, afflicted probably by the hot weather, had been cross and fretful all day, was asked rather sharply by his mother: "What's the matter?" "I want to know," was the child's prompt reply.

Possible Patron—What do you charge for your paper? M. F. F. Editor—Fifty cents a year. P. F.—My stars and stripes! That's cheap. C. E.—Yes, I put the price so low that no one subscriber will think he can bankrupt me by stopping his paper.

The sleeping-car conductor went out on the platform a minute after dark, and when he came back his face was covered with black. "Papa," said a child, "is that a new porter?"

NEW ADVERTISEMENTS.

"No, my child," replied the father, "we are only running into Pittsburgh."

"That's a nice dinner," said the woman to a tramp; "but why don't you sit down while you eat?" "Sit down!" exclaimed the tramp. "Ma'am, I was an omnibus driver until I got too tired to ride, and I wouldn't know how to eat if I had to sit down to my meals."

The confidence of people who have tried Hood's Sarsaparilla, in this preparation, is remarkable. It has cured many who have failed to derive any good whatever from other articles. For diseases caused by impure blood or low state of the system it is unsurpassed.

A doctor who had been attending a dairyman's hired girl called at the house the other day. "How's your milkmaid?" he asked of the farmer when he came to the door. "It's none of your business how our milk is made," was the indignant response, and the door slammed most emphatically.

CUTICURA

A POSITIVE CURE for every form of Skin and Blood Disease—from PIMPLES to SCROFULA.

SKIN TORTURES OF A LIFE TIME INSTANTLY RELIEVED BY A WARM BATH WITH CUTICURA SOAP, a real Skin Beautifier, and a single application of CUTICURA, the great Skin Cure.

This repeated daily with two or three doses of CUTICURA RESOLVENT, the New Blood Purifier, to keep the blood cool, the perspiration pure and unobstructed, the bowels open, and the liver and kidneys active, will speedily cure Eczema, tetter, ringworm, psoriasis, lichen, pruritus, scald head, dandruff, and every species of torturing, disfiguring, itching, scaling and pimple diseases of the skin and scalp, with loss of hair, when physicians and all known remedies fail.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c.; RESOLVENT, 50c. Prepared by the PORTER, DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

PIMPLES, blackheads, chapped and oily skin prevented by CUTICURA MEDICATED SOAP.

Tutt's Pills SAVES MONEY.

One box of these pills will save many dollars in doctor's bills. They are specially prepared as a

Family Medicine, and supplies a want long felt. They remove unhealthy accumulations from the body, without nausea or griping. Adapted to young and old. Price, 25c. SOLD EVERYWHERE.

University of the State of New York.

(Continued from First Page.)

dispose thoroughly of the carcasses. It has been found that even where they are buried deeply that the seeds of the disease are carried to the surface by worms, and act as a source of contagion for years afterwards.

The most effective plan is to burn the dead animals, but thoroughly covering with a thick coat of quicklime and burying deep is the next best.

Costly Uncleanliness.

The present market range for butter is from 20 to 25 cents. As much labor was expended over the eight cent stuff as over the 20 cent butter. The loss is 250 per cent, all incurred by neglect of the commonest rules of cleanliness. Sometimes the loss is due to mistakes. A man to keep his cows warm in cold weather and to save feed closes up every crevice by which air can enter. This causes the atmosphere of the stable to become impure, and as it is breathed over and over a taint is communicated to the whole system and concentrates in the milk. Impure air is charged with the most destructive germs which are absorbed by the milk, not only in the cows but in the dairy where the milk is set. These germs cause acidity in the milk, and this affects the cream in the churn, which foams up by reason of the evolution of gas produced by the decomposition going on in the acid cream and the butter cannot be gathered.

The weary woman at the churn, fretted by the heat and the tiresome, disappointing labor, is simply striving with some uncleanliness—it may be no more than an odor from barnyard, manure heap, slopheap or cesspool, from which there is flowing out, if we could only see it, a stream of uncleanliness just as smoke pours from a chimney and diffuses itself through the air. Other evils besides these result from this and other neglects. Scarlet fever, typhoid, diarrhoea with its results (dysentery and bloody flux), all common diseases of the farm, are produced by these deadly germs of decaying matter, which is what is known as filth. And more than this, the milk taken from such places is apt to carry with it into the houses where it is consumed these same diseases, and so produce no one can tell what mischief.—N. Y. Tribune.

English Tribute to America.

The Nineteenth Century is a monthly review, published in London, and is a mirror of English opinion. The last issue has an article upon "Our Great Competitor," by James Keith, and as the Boston Commercial Bulletin states, it is one of the most substantial tributes to the advancement made by America over the other nations that pen could write.

The advantages of a free government are quite cleverly depicted, and a sharp contrast with Great Britain is drawn. Invention, the life and soul of progress to any nation, there is a welcome and an encouragement in the United States while in England barriers bar the way. Here the fees for a patent amount to the sum of \$55 for a period of seventeen years; in England inventors have to pay the government the sum of £154 in government fees during a period of fourteen years for every invention patented.

In the matter of taxation there is a marked contrast. Our taxation for the government and civil service is paid out of the import duties, and taxes are much less proportionately than in Great Britain, with less of the grinding poverty and misery. Take the case of London for example: The taxes average 25 to 30 per cent on the rental, and the rental is not small, while there is a special tax levied on all coal that comes into the city, to the extent of thirteen pence per ton. The electric light cannot be applied on any large scale owing to the dead weight of taxation; telephony and telegraphy are so taxed that no private individual can afford to apply them in business; the government holds the telegraph and main wires, and will neither take up telephony itself, for the use of the public, nor give reasonable facilities for the private companies to do so. The Briton who writes in the Nineteenth Century is candid enough to remark: "Need it be wondered at that in the application of scientific appliances we are far behind America."

There is a great contrast between the school systems of the United States and Great Britain. Here every child is (presumably) thoroughly educated, at the expense of the government. We have laws in every State for the schooling of the children, and in most states these laws are compulsory. In England the cost of education bears upon all classes of society and in consequence poor people try every expedient to cut short the school term of their children's education.

The most remarkable incident of this outspoken article is the arraignment of the governing system. "We must decentralize more—following the successful example shown by the United States and our own colonies—and establish local parliaments in England, Scotland, Wales and Ireland, for the settlements of all matters pertaining to local government in each of these countries; leaving imperial matters to be settled solely by the Parliament in London, if we are to have progressive legislation and to relieve the people of heavy burdens."

This is a small tribute of praise, but it is deserved, for in no other plan of national entity has our own State sovereignty, local town government, and federal unity been carried so successful an issue.

It is significant that the English writer refers to America as "our great competitor." He admits our advantages in natural resources, that we are the greatest agricultural manufacturing and mining nation in the world, with unlimited credit, and are no unworthy foe.—U. S. Economist.

A Worm that Eats Steel Rails.

The existence has just been discovered of a detestable microbe which feeds upon iron with as much gusto as the phyloxera upon the vine. Some time ago the greatest consternation existed among the engineers employed on a German railway by accidents occurring always at the same place, proving that some terrible defect must exist either in the material or the construction of the rails. The German government directed an inquiry to be made and a commission of surveillance to be formed for the purpose of maintaining constant watch at the spot where the accidents—one of them attended

with loss of life—had occurred. It was not, however, until after six months had elapsed that the surface of the rails appeared to be corroded, as if by acid, to the extent of 100 yards. The rail was taken up and broken, and it was perceived that it was literally hollowed out by a thin gray worm, to which the qualification of "rallivorous" was assigned, and by which name it is to be classed in natural history. The worm is said to be two centimetres in length and of the size of the prong of a silver fork in circumference. It is of a light gray color, and on the head carries two little glands filled with a corrosive secretion, which is ejected every ten minutes upon the iron. This liquid renders the iron soft and spongy and of the color of rust, and it is then greedily devoured by the insect. "This is no exaggeration," says the official report of the commission, "that this creature for its size is one of the most voracious kind, for it has devoured thirty-five kilograms of rail in a fortnight."—Cologne Gazette.

THE EASTERN PEACH TRADE.—It was reported at the Mercantile Exchange yesterday that the peach trade had received a boom by the arrival of several trains from New Jersey and Delaware fruit centers, which were laden to their utmost capacity with beautiful specimens of the luscious fruit. The Jersey peaches are large and in excellent condition, and the specimens from Delaware are not less desirable because they are smaller in size. Splendid fruit of this kind can now be had for 75 cents and \$1 a basket. This price will hold until the first of next week, when it is likely it will go "way down." The fruit is larger and juicier than it has been for years. It is safe to place the sales of last week at 100,000 bushels and crates in this city alone. When the season is at its height this amount will probably represent the average daily sales.—N. Y. Commercial Bulletin, Aug. 30.

THE Ohio Live Stock Commission has decided to maintain the quarantine established against Cook County, Ill., sometime on account of the existence of contagious pleuro-pneumonia. No cattle wintered south of Kansas and Missouri will be permitted to enter that State for fear of Texas, or Spindle fever. A quarantine has been declared against Dewitt County, Ill., on account of the prevalence of contagious disease among horses in that county.

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Commercial.

DETROIT WHOLESALE MARKET.

DETROIT, August 22, 1887.
FLOUR.—The market shows little change. Low grade stock is very weak. Trade is of fair proportions but by no means active. Quotations on our lots are as follows:
Michigan roller process.....\$3.25 @ \$3.75
Michigan roller process.....\$3.50 @ \$4.00
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